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Executive Summary

- During the last fifteen years, many Latin American countries have enjoyed massive windfalls due to dramatic increases in international prices of oil, minerals, and some agricultural products. This significant expansion of their fiscal resource has led to an increase in public expenditure.
- Focusing on the impact of mining-specific revenues, this report aims at exploring the effect of public expenditure in Peru focusing on gender inequality, and more directly, on women's health outcomes. The main objective is to identify a set of gender-related performance measures in the health sector, using a variety of empirical methods to link them with public sector expenditures in Peru.
- Our technical strategy includes a mixed-method framework, combining quantitative econometric analyses with qualitative data analyses, using a quasi-experimental method that would compare control and treatment groups. This study takes advantage of the fact that mining-production revenues have an exogenous component (as they are determined based on international prices), in order to define treatment and control groups.
- Econometric estimates indicate that public expenditure is significantly associated with improvements in women's health status. In particular, regression analyses show that increases in public expenditure, measured in the form of increased mining royalties, have positive impacts on health-related outcomes for women, improving their hemoglobin levels, reducing anemia levels, improving household wealth, and reducing the number of births in the previous five years
- Qualitative results support these findings, showing better health conditions in treatment group areas (i.e. case study districts where mining tax revenues are larger), compared to control group districts. Findings indicate the greater public expenditure in treatment group districts has contributed to the larger supply of healthcare providers both public and private, as well as greater access to ambulatory services in isolated areas. This larger healthcare supply not only has improved the access but also the quality and broader variety of health services in these areas.
- A second factor discussed during the qualitative interviews was the growing access to public health insurance (SIS). This social program has provided individuals with access to modern health services and medicines.
- Despite the perceived improvements on infrastructure, medical equipment, ambulatory services, access to public insurance and free services, it is clear that more needs to be done, particularly toward gender-equality. Women are still facing greater health disadvantages, as regular OB/GYN preventive and specialized services are still difficult to access. In-depth interviews with experts support this statement, proposing some solutions to public expenditure. For instance, experts suggest that mining canon revenues could be used indirectly to improve health outcomes, such as sewage, health centers, running water, and the like.

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I. Introduction

During the last fifteen years, many Latin American countries have enjoyed massive windfalls due to dramatic increases in international prices of oil, minerals, and some agricultural products. This significant expansion of their fiscal resource has led to an increase in public expenditure. Unfortunately, little is known about whether these resources have been efficiently used or not, or if they have had any effects on gender-specific outcomes, particularly on women's health. Managing these sudden large windfalls could be very challenging from a public financial management perspective.

To this day, there is no research in Latin America that focuses on how these funds have been managed or allocated. Little is known about their effects on gender outcomes, or on any social sector. It is evident that more needs to be done to explore ways to improve these public financial management challenges, as well as to monitor and to evaluate the impact on social outcomes, particularly on gender-specific effects.

The case of Peru is an illustrative and particularly relevant case. This country is one of the most important mineral producers in the world, having largely benefited from the increase in the prices and demand of minerals. Mineral production has massively increased in the last 12 years, from US\$1,350 to around US\$8,550 million dollars (Ministry of Energy -MEM and Ministry of Finance-MEF estimates). The Peruvian government has redistributed mining revenues (i.e. Mining canon)¹ to local governments or municipalities, providing them with greater resources. The budget allocated to municipal governments has grown from US\$70 million in 2001 to more than US\$6 billion in 2013 (MEM and MEF estimates). Although, in general studies have shown a consistent decline in poverty levels over the past 10 years,² there are limited studies attempting to measure the impact at the local municipality level, particularly on gender equality and on the population's socioeconomic level.

This report aims at exploring some of these questions, focusing on the impact of mining-specific revenues on gender inequality, and more specifically, on women's health outcomes. The overall objective is to identify gender-related performance measures in the health sector, using a variety of empirical methods to link them to public sector expenditures in Peru. In order to uncover both correlation and causal links, this study uses quantitative household survey data, as well as qualitative information from focus groups and in-depth interviews with local residents, health care workers, and experts in health research in Peru. These analyses are critical to produce a more comprehensive gender-based health performance toolkit that could provide practitioners with a set of valid instruments for assessing the impact of public spending on gender-specific health outcomes, placing greater emphasis on the unobserved factors that may be driving these gender-based outcomes.

Our technical strategy includes a mixed-method framework, combining quantitative econometric analyses with qualitative data analyses, using a quasi-experimental method that would compare control and treatment groups. This study takes advantage of the fact that mining-production revenues have an exogenous component (as they are determined based on international prices) to define treatment and control groups. These groups are selected based on official estimates of

¹ In this report, with "Canon" we refer only to Mining Canon, unless specified otherwise.

² World Bank estimates show a decrease in poverty levels from around 59 percent in 2006 to around 23 percent in 2014 (<http://data.worldbank.org/country/peru>).

mineral production, using the information from the most recent Ministry of Energy and Mines (MEM) data collections. This methodological approach is ideal for impact evaluation purposes, as it is commonly used to reliably estimate causal effects, and in this case, of public expenditure on gender-specific outcomes.

This report is structured as follows: the first section includes a general description of the country's mining production and revenues, particularly looking at areas with greater production and mining canon compared to those with smaller production and mining canon revenues. The second component of the report describes the methodological approach, both quantitative and qualitative analyses, and databases' descriptions. The third component presents results from the quantitative analyses (difference-in-difference), using household survey data for various years. The fourth component presents and discusses the qualitative analyses results. This component presents analyses that would provide more in-depth information validating or adding information to the quantitative component results. Results from these analyses are critical to develop the toolkit to be used for evaluation and policy making purposes, looking to assess gender-related effects of public expenditure. The final component provides this toolkit of gender-based health performance measures.

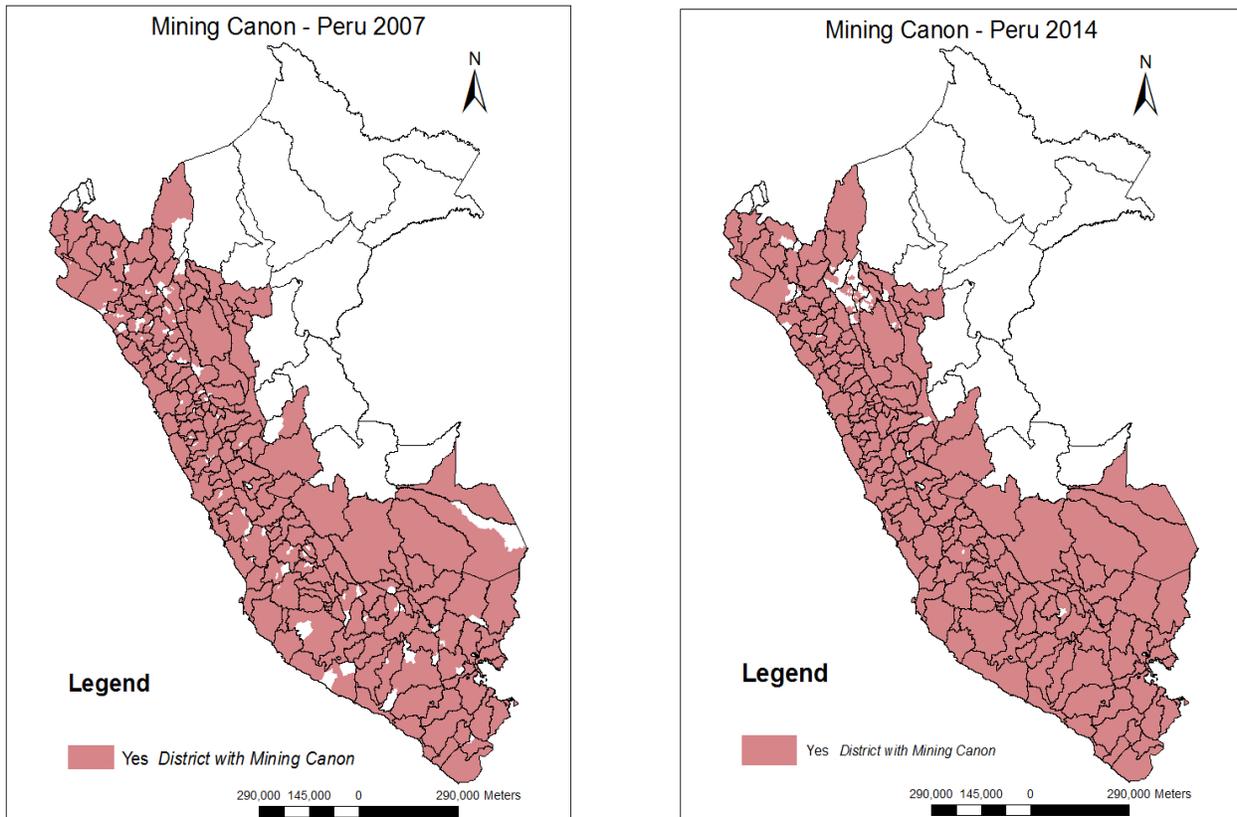
II. Mineral Production in Peru: Background Description

The canon is the rent directly derived from the extraction of natural resources. Determined by a set of specific rules, these royalties represent a fraction of the total taxes paid by extracting companies, directly allocated to districts, province and regions where the resources were extracted. Although there are several types of canon in Peru, the most representative is the Mining Canon or "*Canon Minero*".³ This study focuses on the mining canon, commonly deemed as an important public expenditure redistributive tool.

Data evidence that the majority of Peruvian districts receive some income from Mining Canon. Estimates even show an increase in the numbers of canon-receiving districts between 2007 and 2014 (see figure 1). More specifically, figure 1 shows that, overall, only two regions do not benefit from these mining royalties, the Loreto and Ucayali regions, both located in the jungle or "*Selva*" region. For methodological purposes of this study, this represents a significant challenge, as the group of potential control regions (i.e. regions not receiving any Mining Canon) is limited and geographically different than those selected as treatment group regions (i.e. those receiving Mining Canon).

³ In accordance to the Ministry Resolution No. 266-2002-EF/15 (May 1, 2002), municipalities and regional governments are entitled to receive 50 percent of the taxes collected from mineral extraction, and they must be invested in education and social programs. For additional information visit http://www.mef.gob.pe/index.php?option=com_content&view=article&id=454

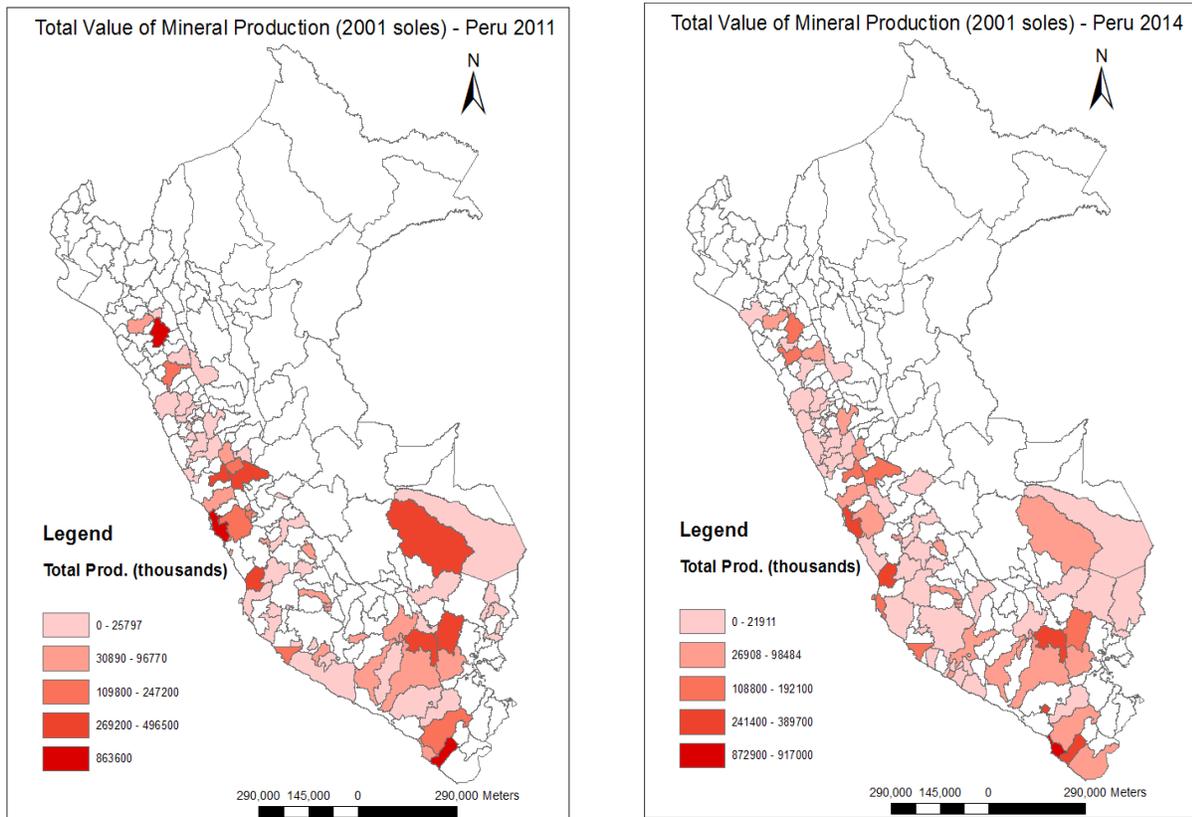
Figure 1: Districts with Mining Canon. Years 2007 and 2014.



Source: Ministry of Energy and Mining (MEM) Data. Compiled and elaborated by authors.

Regarding mineral production in Peru, figure 2 shows estimates by district for the years 2011 and 2014. Overall, estimates show large variance on the amount of tax revenues received, across regions that are currently producing the mineral. These differences are largely explained by the geographic characteristics of the mines' locations, making them more (or less) prone to have certain types of minerals. Comparisons of three of study areas, based on information from the 2014 MEM data, show significant differences on mining canon revenues associated with the geographic location. For example, the Yungay and Carhuaz provinces, both located in the department of Ancash, have more similarities regarding geographic elevation, landscape type, soil quality, and geographic size, compared to the Canta province, located in the Lima department (see annex A for additional detail).

Figure 2: Value of Mineral Production, by District. Years 2001 and 2014



Source: Ministry of Energy and Mining (MEM) Data. Compiled and elaborated by authors

The Carhuaz province is very rich in minerals such as copper, gold, silver, lead, and zinc, and estimated Mining Canon revenues of over 10 million 2014 Peruvian soles. The Yungay province’s mineral production was largely gold and silver, with estimated revenues of over 12 million 2014 Peruvian soles. On the other hand, the Canta province, despite having similar geographic, landscape, and size characteristics, does not share the same type and amount of mineral resources, clearly observed in the significant differences in the estimated canon revenues (see table 1). Indeed, estimates indicate that the Canta province received in 2014 a significantly smaller Canon (approximately 50 times smaller) than the other two provinces.

Table 1: Mining Canon Revenues by Province

Selected Province	Amount of Mining Canon revenues (Soles – 2014)
Canta Province	268,560
Carhuaz Province	10’400,000
Yungay Province	12’800,000

Source: Ministry of Energy and Mining (MEM) Data.

III. Mixed-Methods Methodology and Data Description

This study uses a pseudo-experimental methodological approach, comparing treatment and control groups. This method is based on the assumption that the selected treatment and control groups have similar characteristics but they are different on the specific exogenous factors. Using the information from the most recent Ministry of Energy and Mines (MEM) data collections, treatment and control groups are selected based on the production and revenues from mineral extraction. This model is based on the fact that tax revenues are largely determined exogenously by changes in international mineral prices. The specific exogenous variables used in these analyses are local governments and municipalities' access to mining revenues or mining canon and mineral production.

III.1. Quantitative Component

III.1.A. Methodology Description: Econometric Approach.

The quantitative component uses a Difference-in-Difference (DID) model to estimate the effects of public expenditure on gender-based health measurements. The main exogenous or treatment variable is the revenues from mining extraction, largely determined by exogenous fluctuations of international prices of minerals. Geographic location also affects these revenues, as the distribution of mineral resources depend on certain geographic characteristics. This also adds to the heterogeneity in mining revenues across municipalities and regions as well as the evolution of mining royalty transfers over time.

This analysis of the mining royalties over time follows the research line explored by Maldonado (2014⁴, 2015⁵) and Maldonado y Ardanaz (2015)⁶ which exploits the variation of the natural resources revenues to evaluate a potential impact political effects, political support and government expenditures. Our estimation and assumptions over the model are the same as these papers except for the treatment identification variable. We use different discrete variables to identify the treatment and control group districts instead of a continuous one and we follow the regression specification as mentioned in Wooldrige & Imbens (2007⁷) for the case of individual panel data, many time periods and arbitrary treatment patterns.

⁴ Maldonado, S. (2014) The Political Effects of Resource Booms: Political Outcomes, Clientelism and Public Goods Provision in Peru. Working Paper.

⁵ Maldonado, S. (2015) Resource Booms and Political Support: Evidence from Peru. Working Paper.

⁶ Maldonado, S. & Ardanaz, M. (2015) Natural Resource Windfalls and Efficiency of Local Government Expenditures: Evidence from Peru. Working Paper.

⁷ Imbens, G., & Wooldridge, J. (2007). Difference-in-differences estimation. National Bureau of Economics Research Working Paper.

We propose to do the analyses at the municipality level, comparing the particular impact of municipalities that benefited from an increase in their public expenditures budget in relation to those that did not. These variations allow us to establish causal effects on the efficiency of expenditures in the health sector or at least the determinants of gender-specific expenditures in health. The mathematical DID econometric specification is as follows:

$$Y_{ijt} = \alpha_j + \lambda_t + \beta C_{ijt} + X'_{ijt} \delta + \varepsilon_{ijt}$$

Where Y_{ijt} is the health outcome in household i located in district j for the period t ; α_j and λ_t are respectively district/province and years fixed effects. C_{ijt} is a variable that identifies treated districts related to the per-capita mining royalty transfers allocated to district j in period t . X'_{ijt} includes household, district and individual characteristics and ε is the error term.

The parameter β is the main parameter of interest, capturing the causal effect of the variable of interest. To this basic specification, we will include heterogeneities that will capture specific characteristics. All the empirical specifications will include time fixed-effects, district and province fixed effects, which will account for the time-series changes and time-invariant characteristics at district level, respectively. In addition, we will cluster the standard errors at district level. We employ data for the 1,836 municipalities for period 2007-2014.

The main assumption behind this technique is that time invariant unobserved heterogeneity are potentially associated with similar trends. Difference-in-Difference estimators can control for initial conditions, allowing for unobserved heterogeneity between control and treatment groups/areas (i.e. control areas with smaller mining revenues and treatment areas with greater mining income transfers). Not including these control variables would lead to selection biases. Given that unobserved heterogeneity are assumed to be time invariant, using the differences would cancel any observed biases. The equal trends or parallel paths assumption indicates that the average change in the control group would follow a similar pattern if a similar change is observed in the treatment group, if there no changes are observed in the exogenous (or treatment) variable. However, any observed differences between the control and treatment groups' outcome variables would be attributed to changes in the exogenous variable of interest.

III. I. B. Quantitative Databases Description: Surveys and Government Data

The quantitative sample used for these empirical analyses consist of information from 1,836 municipalities for period 2007-2014. The total sample consists of around 201,586 reproductive-aged women (15 to 49 years old), with district and municipality level information merged into their household and individual data. The sample is only representative at the national and regional levels. Information from three different databases were combined to create the final database:

- The National Demographic and Health Survey (ENDES- Encuesta Demográfica y de Salud Familiar). The National Institute of Statistics of Peru (INEI) collects this survey annually. The household survey gathers information using different modules (household characteristics, member characteristics, women characteristics, infant characteristics), with a large focus on women's overall and reproductive health and their children. This study's

sample uses information from the years 2004 to 2014, using household and individual information of reproductive-age women (defined as women ages 15 to 49).

- Peruvian Ministry of Economy and Finance Data (Portal *Consulta Amigable*): Information with expenses and revenues for every local government/municipality in the country come from the Ministry of Economy and Finance (MEF) public on-line portal *Consulta Amigable*. It also provides information about the sources of the revenues and the corresponding budget allocations.
- Mineral Production Database: The Ministry of Energy and Mines (MEM) publishes information on minerals production, by type of mineral processing (refinery, extracting, smelting, and concentration), producer, and geographic location/district.

An initial exploration of these databases' questionnaires provided us with a set of 40 health outcome measures. Table B1 (annex B) presents the the full list and description of all the available measures that comprise the toolkit of health performance measures. This list of measures aim at portraying a comprehensive picture of the overall health condition in Peru and its association with public expenditure, largely focusing on gender-based health outcomes. Measures range from access to water and sanitation services, affiliation to public health system, household health expenditure, to more precise health indicators such as individuals' weight and height, hemoglobin levels, hypertension, and blood glucose levels, as well as tobacco and alcohol consumption, cancer prevention awareness and control, and mental health.

For the purpose of this exploratory study, we restricted the list of indicators to a smaller set of health outcomes. In particular, in order to test the validity and robustness of various women's health measures, as well as their potential associations with public expenditure, this study utilizes these five different health variables (see table B2 in annex B for a detail description of these selected health outcomes):

- Hemoglobin levels, continuous variable.
- Hemoglobin level adjusted by geographic location (i.e. geographic elevation/altitude of district), continuous variable
- Anemia level, dummy variable equal to 1 if woman has any form of anemia (severe, moderate or mild).
- Total number of births the women had in the past five years, continuous variable.
- Household socio-economic status/wealth index, continuous variable. This wealth index measures the number of household assets owned, commonly associated with overall well-being (and potentially long-term health status) of the household (see DHS index for additional information on this index).

In addition, four different exogenous/treatment variables were selected to explore the potential effects of public expenditure on women's health outcomes (see table B2). The four treatment variables were included in the analyses, in order to check for robustness of the effects:

- Dummy variable equal to 1 if the district level **canon revenues are greater than the national average for each specific year**. For example if Carhuaz received a bigger amount

of royalties in 2007 than the national mean, the district observation will be equal to one for that year.

- Dummy variable equal to 1 if the **district received any amount of Canon revenues for that year**. This is a weaker dummy, as only 13% of all districts did not receive royalties during the 2007-2014 period.
- Dummy variable equal to 1 if the **district had mineral production for the specific year and zero otherwise**. This variable considers all districts, regardless of whether they received any canon revenues or not.
- Dummy variable, **restricted only to districts that received canon revenues**. This dummy is equal to 1 if the **district had mineral production for the specific year and zero otherwise**. The main intuition for this variable is that districts that were mineral producers, following the distribution methodology of the Canon⁸, could receive a larger amount of revenues for their local governments.

Table B2 (see annex B) also presents a description of all control variables included in the regression analyses. The set of control variables used was conservative, trying to obtain a parsimonious model, including women's educational level, health insurance holding, household head's gender, current age, pregnancy status, type of household floor, water facility and the presence of underage children in the household. Table B3 (see annex B) presents a statistical summary of all variables presented in these analyses.

III.2. Qualitative Component

III.2.A. Methodology Description: Focus Groups and In-Depth Interviews.

The main purposes of the qualitative component is to explore unobserved factors that could contribute to the development of a more comprehensive toolkit of health measures, aimed at broadening the understanding of the overall health status of women in Peru. Qualitative information is gathered using focus groups and in-depth semi-structured interviews, using the same pseudo-experimental methodological approach, comparing information from treatment and control groups.

As the majority of districts in Peru either produce or receive revenues from mining (or both), it is not possible to classify the treatment group as the districts with mineral production or revenues, and control group districts as those not producing nor receiving mineral revenues. Treatment and control groups are selected based on the production and revenues from mineral extractions, using the information from the most recent Ministry of Energy and Mines (MEM) data collections.

As stated above, evidence indicates that almost all districts in Peru collect some tax income from the mining canon, even showing an increase in the numbers of canon-receiving districts in the past seven years. In addition, the only two regions that do not benefit from these mining royalties, both located in the *Selva* region, are significantly different from the rest of the country. This makes the

⁸ http://www.mef.gob.pe/index.php?option=com_content&view=article&id=2296%3Acanon-metodologia-de-distribucion&catid=150%3Atransferencia-y-gasto-social&Itemid=100694&lang=es

selection of control and treatment groups, for the purpose of this study, methodologically challenging to justify⁹.

The study cases were selected based on geographical similarity and proximity, similar geographic elevation (i.e. sea-level or higher elevation), and geographic location (i.e. coast or highlands). Qualitative information was gathered from three provinces, located in two regions of the country. Interviews were conducted in Canta, Lima region (control group) and Carhuaz and Yungay, Ancash region (treatment group). For more information on these provinces, please see annex A.

III.2.B. Database Description: Sample Description and Participants' Profiles

A total of 12 focus group (FG) interviews were conducted (three FG interviews per selected province), consisting of 110 participants, in their majority local adult women. In addition, a total of six in-depth semi-structured interviews (IDI) were conducted, including four IDI to selected women who previously participated in one of the FGs, and two IDI with selected local municipal government's authorities (phone interviews). Interviews with two experts in the area of health were also conducted.

At the beginning of each FG meeting, the FG moderator collected basic information from all FG participants, using a simple survey. This survey included eight questions about age, place of residence, type of dwelling (rented, own, etc.), description of household members, mother tongue (in order to characterize indigenous), current job status, where they commonly went to receive medical attention when sick, and health insurance information (whether they had any or not and the type of insurance).

The large percentage of FG and IDI participants were women (82 percent), as originally proposed in the sample design. The distribution by mother tongue, used as a proxy for racial background / indigenous race, was 67 percent Spanish only speakers, 27 percent Quechua only speakers, and six percent both Spanish and Quechua speakers. There were large differences in these distributions between control group (Lima) participants (100 percent were Spanish only speakers) and treatment group (Ancash) participants (see annex C for more detail information).

Regarding the participants' work status, there were large differences between participants from the control and treatment groups. Among control group participants, 62 percent report being currently working, whereas only 31 percent report being currently working among treatment group participants. Among those currently working, 48 percent of participants indicated working on farming activities in the treatment group, and only 21 percent among control group participants (see annex C for more detail information).

Broken down by indigenous race, among those currently working, estimates indicate that indigenous participants are almost three times more likely to be working on farming, compared to their non-indigenous counterparts. The opposite is true for cattle-raising, where non-indigenous participants are more than twice as likely to work on this occupation, compared to indigenous participants. As

⁹ The assignment of districts in control and treatment groups was based on the district's estimated mineral production, using the information from the most recent Ministry of Energy and Mines (MEM) data collections.

for “other” occupations (such as security personnel, municipality workers, construction workers, or housekeeping), non-indigenous participants are more than eight times more likely to have those occupations compared to their indigenous counterparts.

Regarding their access to health insurance, a large percentage of participants reported having health insurance (around 85 percent). This significantly large percentage of insured participants is partially explained by the recent increase in the Seguro Integral de Salud (SIS) coverage that largely focuses on rural and poor and extremely poor districts. Only 15 percent of the total participants reported not being covered by any insurance.

III. Empirical Results

This component presents the results from the quantitative econometric analyses as well as the qualitative analyses. The main goal of these analyses is to provide additional information regarding the usefulness and validity of the set of health measurements. Overall, quantitative results indicate that public expenditure is significantly associated with improvements in women’s health status. In particular, regression analyses evidence a significant impact of greater mining canon resources on improvements in women’s health status.

Qualitative results support these findings, showing that treatment areas (i.e. case study districts where mining tax revenues are larger) are more likely to report greater access to health services, compared to control areas. In addition, treatment group districts report better quality doctors and medical personnel, and more options both from public and private providers. Despite these differences, findings evidence a large room for improvement both across treatment and control groups. Experts’ input support these findings, indicating that local governments have imperative work to be done re-evaluating and re-adjust the best way to re-allocate all their resources, under this recent massive windfalls scenario. In particular, as suggested by the experts, governments could, for example, re-direct tax canon resources (restricted for infrastructure investments) into investments that could indirectly improve health or social conditions, such as clean water access or sewage systems, or additional health centers/posts built in more remote areas.

III.1. Results of Quantitative Approach

The quantitative component used a Different-in-Difference (DID) regression analysis model, using an Ordinary Least Square (OLS) methodology. In order to test for validity and robustness, various regression models were estimated using different exogenous/treatment variables: (i) canon greater than national average, (ii) currently receiving canon, (iii) currently mineral producer, (iv) among districts currently receiving canon, currently mineral producer. The women’s health outcome measures utilized as dependent variables are (i) hemoglobin level, (ii) adjusted hemoglobin level, (iii) anemia, (iv) number of births, and (v) wealth index.

In order to test for robustness, various specifications were used testing alternative fixed effects, including (i) district fixed effects, (ii) province fixed effects, and (iii) no-area fixed effects. All regressions include time/year fixed effects. The full set of control variables was included on each

regression (i.e. education, health insurance, household head's gender, floor of household, current age, pregnancy status, presence of children under age and the water facility).

Initial correlation analyses evidence statistically significant correlations between all treatment variables and dependent variables, except for one combination (i.e. canon greater than national average and severity of anemia). These results indicate that there is a significant association between public expenditure (in this case, from mining canon sources) and women's health status. Some interesting results are observed particularly using the two canon producer treatment variables. These two variables, when correlated with all but the hemoglobin level variable, show coefficient signs that are opposite to the ones observed for the other two treatment variables. It is possible that the negative environmental impact of being in a district where mineral production is currently undergoing (i.e. air and water pollution, issues with contaminated crops/soil, etc.) is greater than then positive income effects, having a net negative impact on their health outcomes. Table 2 presents a descriptive summary of these correlations.

Table 2: Correlation Coefficients between Treatment Variable (public expense) and Dependent Variable (Women's Health Outcome).

	Hemoglobin level	Hemoglobin level altitude adjusted	Anemia	Wealth index	Births in past 5 years
Hemoglobin level	1				
Hemoglobin level altitude adjusted	0.75*	1			
Anemia	-0.52*	-0.59*	1		
Wealth index	-0.18*	0.03*	-0.05*	1	
Births	-0.03*	-0.05*	0.05*	-0.21*	1
Canon greater than national average	0.05*	0.02*	-0.01	0.20*	-0.05*
Canon Receiver	0.22*	0.05*	-0.03*	0.05*	-0.06*
Canon Producer vs other	0.05*	-0.02*	0.03*	-0.02*	0.01*
Canon Producer vs receivers	0.05*	-0.02*	0.02*	-0.02*	0.01*

Note: (*) Significant correlation at 5% level. Sidak adjusted values. Simmetric matrix.

Sample: Reproductive Age Women (15-49 years old).

Regression analyses support these initial correlation findings. As stated above, a large number of regression models were estimated, in order to test the validity and robustness of the analyses (see annex D for the full set of estimated regressions). In addition to using alternative treatment variables and various dependent variables measuring women's health status, all regression models were estimated using three types of fixed effects, district and year fixed effects, province and year fixed effects, and only year fixed effects.

Overall, regression results using the models including the district and province fixed effects show more inconsistent results regarding the statistical significance of canon revenue specific public expenditure on women's health outcomes (see annex D). Although the majority of coefficients are significant or close to significant (at 1% percent), their signs are, in the majority of cases, consistent across models.

Estimates from the models that only included year effects are consistent with the initial correlation explorations. Table 3 presents a summary of regression results. Even after controlling for demography, household, and community characteristics, associations are statistically significant and consistently positive across all treatment variables on the hemoglobin level variable. Coefficient effects are also positive for the canon greater than national average (0.434) and district receives Mining Canon treatment (2.104) variables on the adjusted hemoglobine level and negative on the anemia model (-0.001 and -0.030).

For the two models using the currently mineral producers treatment variable, coefficients are negative on the adjusted hemoglobine level (1.270 and 1.267) and positive for the anemia models (0.033). It is possible that by controlling for geographic location (higher altitude) the negative effects of mining production might overpower the potentially positive income effects on health, as the majority of mining producer districts are located in the highlands. These results provide a critical piece of information to account for when developing and designing a more comprehensive health measure toolkit.

Similar results are observed for the household wealth index models, showing consistent positive effects when using the first two treatment variables, but negative effects when estimating the producer district treatment model. One potential explanation for these results is that, given that the specific districts where the actual production is being extracted tend to be poorer and located in more isolate, rural, higher altitude areas. The model using the number of births in the past five years dependent variable has consistent estimated positive coefficients across all regressions using all treatment variables. This association shows the potential effect of having more or better services at the district level through new infrastructure investment done through canon revenues, modifying couples' decisions to have (or not) more kids based on the available health, education or other services that their children could receive in the future.

Table 3: Summary of Regression Analyses Estimates: Year Fixed-Effects.

	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
Canon revenues greater than national average	2.550*** -0.44	0.434** -0.172	-0.001 -0.003	0.275*** -0.017	0.010*** -0.003
District receives Mining Canon	11.070*** -0.274	2.104*** -0.169	-0.030*** -0.005	0.293*** -0.023	0.001 -0.005
District is mineral producer (vs non-producers)	4.276*** -0.795	-1.270*** -0.258	0.033*** -0.006	-0.198*** -0.023	0.025*** -0.005
District is mineral producer (vs Canon receivers)	4.366*** -0.798	-1.267*** -0.259	0.033*** -0.006	-0.194*** -0.023	0.024*** -0.005

Source: ENDES, Consulta Amiga- MEF, Mining Production Data - MEM.

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Sample: Reproductive Age Women (15-49 years old).

III.2. Results of Qualitative Approach

All focus groups and semi-structured interviews were conducted in Spanish or Quechua. In order to analyze this qualitative information, all recorded interviews were transcribed and translated into English. All different transcription files were connected and analyzed using Atlas Ti 7. Qualitative data exploration used consistent checks using codes and quotations, to organize the specific clusters of topics. Annex E presents the small survey questionnaire, the FG and IDI guides, and the list of codes used for the analyses. No real names have been included in the presentation of these results to respect the anonymity and confidentiality of the participants. Annexes G and H present transcriptions and translations of in-depth interviews with local residents and experts.

III.2.A. Control Group: Canta Province, Lima

Interviews in the Canta province covered the villages of Paríamarca, Obrajillo and the district of Canta (capital of the province). A total of six FGs and six SSIs were conducted. The total number of participants was 47 individuals, mostly women. Interviews lasted on average half an hour, discussing issues of common diseases, local health supply, quality of health services, insurance coverage, and the role that municipalities play on issues of women's health. A community authority participated in one of our focus group meetings, and two local healthcare technicians/managers participated in one meeting. They provided to the discussion a more informed view of the health issues in the province since they had a better understanding of the overall situation, because of their positions.

III.2.A.i Focus Group interviews with local resident women

All FG meetings began with a discussion about the most common diseases observed in their villages or provinces. Results evidence consistent responses across most participating groups. The six predominant diseases included respiratory diseases (mostly flu and cold), bones diseases (osteoporosis and osteoarthritis), anemia, intestinal problems, diarrhea, and gastritis.

FG participants indicated that these diseases are frequently due to poor nutrition both among children and adults, largely affecting their immune systems. In particular, one participant healthcare technician indicated that the population did not have balanced diets or good eating habits, as they lacked knowledge on basic nutrition, commonly leading to anemia issues later in life. Poor eating habits and lack of knowledge about the nutritional value of certain food, substituting more nutritious products (such as milk) for cheap ones (such as coffee), or more readily available ones, contributed to this increase in certain diseases.

P2: So, we have milk [because we are cattle farmers]. However one reason people get sick in other communities is because people do not know the nutritional value of milk. What they do is, they sell the milk to buy coffee

Paríamarca – Focus Group N° 3

Participants indicated that respiratory diseases are very common, more frequently affecting children as well as adult farm and cattle farming workers. The constant exposure to humid or wet work

conditions, not only led to respiratory diseases but also to early onsets of rheumatism and other bone diseases. An additional concerning factor affecting the overall health condition of these populations was the high levels of pollution, largely affecting the soil quality. This has pushed farmers into using more chemical fertilizers, decreasing the quality of the crops produced and consumed locally:

P2: We also have the pollution. It used to be the case that everything we planted or sowed here in our community, or around in the different communities in the province, all the produce was organic.

I: And now they are polluted?

P2: Now everything needs fertilizer and insecticide otherwise, there is no crop production.

Pariamarca – Focus Group N° 3

Regarding access to health services, participants indicated that although many had access to local health centers, they frequently would have to go to larger healthcare centers, particularly for more complicated health issues or cases where some tests were required (see Annex F for a detailed description of the path that patients would commonly follow as the seriousness of their illnesses increase). Indeed, FG participants indicated that, although some local health centers were supplied with medical equipment and supplies to treat or to test patients, the only medical personnel available to provide medical services were nurses and medical technicians.

For those seeking medical treatment in larger towns or the capital of the province, only general practitioners were commonly available. Participants indicated that a recurring complaint in the Canta healthcare center, for example, was the absence of X-ray services, despite having an X-ray equipment, largely due to the lack of medical technical personnel trained to operate it. Prevention or early detection services were also uncommon, as specialized medical personnel were commonly absent from local health centers. Even simple or routine tests, such as Papanicolaou tests, were sent to the Collique hospital, as local health centers were unable to process them. Results were largely delayed, lasting up to three months, pointing out the high risks for women, particularly those at high risk of cervical cancer.

A recurrent issue that also came up during the FG discussions was the shortage of medicines and medical supplies, even those covered by the insurance. As a result, patients were forced to privately buy their prescriptions, and even basic materials such as bandages, sterile gauze pads, or antiseptic creams, to get the treatment. Participants repeatedly described this problem of self-medication using pharmacist services, in order to avoid wasting time at the health center:

P1: No, no. Here the people self-medicate because the health center is the problem. They go to the health center and there's no medicine. You waste time, money for the appointment and at the end they give you a prescription and you have to go to the drug store. So what we do? We go to the grocery store to find something. Anywhere you can find something to ease the pain or illness but they don't realize that very often that can make you get even worse. They don't have the right dosage.

Obrajillo – Focus Group N° 1

As a result, pharmacists frequently play the role of doctors, also having a closer relationship with patients and the overall population. Participants indicate that pharmacists are regarded as providing better medical attention, as they take more time to listen to patients. FG participants also indicated

that pharmacists prescribed more effective drugs than the ones prescribed at the health centers. Participants, nevertheless, also acknowledged the higher risks of seeking medical advice from pharmacists instead of doctors, and the fact that most pharmacist-prescribed drugs were commonly not covered by their insurance. Despite these issues, participants indicate that seeking pharmacist-prescribed drugs and traditional medicinal herbs and ointments as a temporal remedy until could manage to get an appointment with a doctor or specialized medical practitioner, are common practices:

I: Do you follow the advice of the people at the pharmacy? Do they tell you what medicine you should take?

P1: Of course

P2: Yes

P1: Supposedly they have studied

P3: The medicine from the health center doesn't work

P4: It doesn't cure me at all

Canta – Focus Group N°1

FG participants pointed out that health services in health center located in larger towns were typically from 8:00 am to 8:00 pm. However, healthcare services in smaller towns or villages were commonly from 8:00 am to 1:00 pm. They also indicated that, although in the past they used to have access to doctors during night shifts, now they only had medical technicians in larger towns and no medical personnel at all in smaller towns or villages. Very frequently, doctors did not comply with their work schedules and personal time-off rotations were longer, leaving healthcare centers unattended for several days.

The extended work hours are critical for farm workers, as their working hours typically run until the afternoon. Local healthcare centers, thus, are not an option for these workers, as their daily obligations prevent them from using these services. A FG participant described a very concrete example, having been referred to the Collique hospital for a more complex treatment. The participant declared that in order to make it to the scheduled doctor's appointment on the same day, the person had to leave home (Canta) at 3:00 am, in order to be at the health center at 5:00 am to check in. Once there, the waiting time was long as the number of people waiting to get checked by the doctor was sizeable. However, overall, participants reviewed the Collique hospital as a facility that provides better services, compared to their local or smaller town/village health providers. Participants recognized that some doctors and nurses were nice and made the patients feel well treated, they were able to see specialists, and the hospital or health center was very clean.

The next round of questions in the FG discussion focused on the visible changes perceived towards the quality of health centers, medical personnel, and medical services. In addition, questions were introduced on the role of their municipalities improving health services and dealing with complaints, as well as budget expenditure and awareness of the existence and use of canon revenues. Overall, participants perceived no improvements on health center services, compared to previous years.

Obrajillo participants, for example, mentioned that they have never had a local healthcare center. Their closest health center was the one located in Canta, but it *“hasn't been upgraded. It's the same. Despite being so close to Lima”*. FG participants mentioned that the most recent improvements in infrastructure in the Pariamarca village were made in 1992, mainly because of the support of local doctors who donated a small portion of their land to the Ministry of Health, where the local health center was finally built.

Two main issues regarding the management of medical personnel surfaced during the discussions, one regarding the high rotation of doctors and the other one regarding the poor management skills and abuse of power among those in charge of health centers. Participants indicated that rotations are frequent in health centers located in bigger towns, and they are perceived as negative. They stated that the transition to get new doctors used to the new place, the workload, and to build the trust of the population is difficult, creating even more disincentives to seek proper medical care. FG participants also reported that doctors, particularly those in high-ranking management positions, would use their power to get their friends or relatives into earlier or more convenient doctor appointments, or to reserve medicines for them. Some participants were concerned about how people in the inner circle of the doctor in charge or people holding high political positions were able to get access to medications much earlier than any other patient or to get better treatment opportunities, or to even get jobs.

Nevertheless, a group of health center workers who participated in the FG disagreed with some of these comments, offering the supply side perspective, describing, for instance, how medical personnel was hired. For example, the chief of the Canta health network argued that they have been increasing the number of new nurse hires in local health center, to alleviate the workload that current SERUM medical technicians face,¹⁰ stating that “*at each local health center, there used to be only a medical technician, but now they will be working jointly with a nurse*”.

An additional issue discussed during the FGs was the role played by municipalities. Overall, FG participants reported that since the new mayor was elected, the municipality allocated its budget on nothing but roads, largely neglecting the population’s more urgent needs. Participants stated that there was a general feeling of dissatisfaction towards the local government since people felt that “*they [politicians] offer things to get votes*”, while they “*charge taxes for everything*”. For example, some participants indicated that some time ago the municipality promised a hospital for the Canta province as well as improvements in personnel, equipment, and medical supplies. Nevertheless, they never materialized their promise. Participants stated that this would significantly improve the health status of the whole population:

P1: We wouldn't need to go to Lima. We would stay here

P2: Yes. We would pay if we would have access to everything

P1: We could save for the medicine

P3: Right. To go to Lima, to the Collique hospital you have to get up early, when it is still dark. And there are like 80 people queuing for an appointment

Canta – Focus Group N°1

In addition, FG participants stated that the municipality did not play any role on improvements in medical services or health-related issues, as all resources came directly from the Ministry of Health. Nevertheless, when participants were asked about how the municipality allocated its budget, it was evident the general lack of information across all participants. Some participants mentioned that during their town meetings, even when they ask questions about accountability and new projects, they commonly receive no answers from local authorities. They also expressed fears about corruption and neglect from their own authorities.

¹⁰ SERUM is a mandatory annual internship for all the medical students, during their last year of studies.

Participants also evidenced a widespread lack of knowledge regarding the province's Canon revenues. Canta residents, and even municipality authorities, not only did not know about the existence of the canon revenue, but they did not even know what it was. Out of the six interviews that were held with female medical technicians, only two had any knowledge about the canon, mainly because an important part of the canon was indirectly allocated to programs aimed at treating children 3 years old and under. Some FG participants were informed about the canon revenues, and they have even tried to contact their authorities, but they have not received any answer:

P3: When we went to talk to the president he told us the mining canon was small. But we look on the internet, on the website of the ministry of economy and finances

I: You can see everything there, yes

P3: So we have it here. We told him, in January you received 245 thousand, in February 300 or so now up to April you have received 978 thousand soles. How much are your municipality expenses and how much is left for the communities?

Pariamarca – Focus Group N°3

The final topic discussed during the FGs had a gender focus, specifically looking at women's health and their unmet needs. Regarding treatments and access to women's health specialists, participants reported having limited access to gynecological and obstetric services, restricted to Papanicolaou tests (commonly having to wait around three months to get the results back) and basic labor and delivery services. Participants indicated that more complex obstetric cases such as dry births or c-sections were only treated at bigger towns' health centers or the Collique hospital. Emergency cases were transferred using ambulances, which would have to be privately paid for by the patient.

Participants indicate that although most tests (e.g. pregnancy tests) and prenatal check ups, as well as vaccinations for new born babies were available at the local health centers, post-partum check-ups, as well pediatric and dental services were only available at the Collique hospital. In many cases, even simple services for women could not be provided due to the absence of trained medical technicians. For example, FG participants indicated that the Canta health center was equipped with X-rays and ultrasound machines but no trained medical personnel to operate them. Indeed, one of the participants described her frustration when trying to get a vaginal ultrasound and to get laboratory results from a blood pregnancy test:

I: Thanks. You were saying other things that are missing for women. Papanicolaou, the test?

P: Yes, we need a laboratory to take tests. They only have for some urine tests and blood for pregnancy

I: Only pregnancy tests

P: Yes. If it's severe they send you to Lima

I: They send you to Lima. And women here are well treated? Do you think that women are not being taken care of health-wise?

P: Yes, I see they do not help us... they don't provide treatment

I: There are no specialists for your needs?

P: Yes, there are not good doctors, specialists or...

Canta – Interview N°2

III.2.A.ii In-depth interviews with local government's authorities

The first set of IDI to local government authorities were conducted in Canta, with a total of three interviews. Overall, interviews evidence that local government officials were poorly informed about municipality budgets and how they were allocated. For example, when asked about municipality programs targeted to women, one of the IDI participants indicated that currently, there were no projects. However, other IDI participants indicated that at least two projects were currently active, including an emergency project aimed at fighting violence against women¹¹ and the “Vaso de Leche” program¹².

IDI results evidenced large variability regarding the knowledge about canon revenue budgets. Very few participants had information about the existence and even the importance of any canon revenues allocated to their municipality budgets, stating that “*Canta is a low income province all the investments are through the canon. It's the biggest income, the canon and Foncomun*”¹³. There was also some awareness regarding the different types of canon (e.g. fishing, energy, and mining). Among participants aware of the canon, they recognized that the mining canon had positive effects on investments on running water, sanitation, and roads.

The final component of the IDI discussed government authorities' opinions regarding the municipality's current budget expenditure and the areas in which they would give higher priority if they could decide the budget allocation. Participants mentioned several programs where the municipality budget was distributed including Pension 65, programs targeting disabled elderly populations, and investment on health infrastructure. One of the participants indicated that the budget allocation was very well planned and effectively spent as “*everything we promise has been satisfied. The mayor is doing it. I think it's being well spent because we had a participative budget*”.

Regarding their opinions about where to allocate the municipality resources, there was agreement across all participants on the importance of investing on healthcare infrastructure, medical equipment, and quality improvements on medical professionals, both improving bed side manners and providing more training stating the importance of “*the healthcare center, more and better service, more equipment so people can be treated there and not being sent to Lima*”. One of the participants even indicated that some of the investment on health was indirect, as most of the canon revenues were directed to water and sanitation infrastructure investments:

I: The canon income has been used for which areas? Health or in general?

P: The canon was used on health last year because we did water and sanitation work

I: Water and sanitation. You have water and sewage pipes in the other districts

P: Yes, we've improved. With the last year's canon we improved the roads

I: The roads

¹¹ This project was developed jointly by the Centro de Emergencia Mujer (that provided shelter for women victims of abuse) and the Promotion and Monitoring Center (that directly dealt with child abuse). The intervention was implemented in the Canta district, but they expanded the program providing transportation for the other districts as well as community workers who would support victims in those areas.

¹² The “Vaso de Leche” program provides daily meals and focuses on children 6 years and younger, as well as pregnant women and breast-feeding mothers in vulnerable areas. Funding comes directly from the central government, granting program management rights to municipalities.

¹³ The FONCOMUN is the Fondo de Compensación Municipal (Municipal Compensation Fund). It promotes the investment in the peripheral and rural zones through the distribution of revenues to the local governments.

P: Yes, last year
Canta – ID Interviews N°2

III.2.B Treatment Group: Yungay and Carhuaz Provinces, Ancash.

The qualitative work in the Ancash area included six FG interviews and six IDIs, covering the provinces of Yungay and Carhuaz. The total number of participants was 63, largely women, with meetings lasting approximately half an hour. Topics of discussion included common diseases, availability of medical supplies and equipment, quality of health services, health insurance status, and the role that the municipality played, particularly on women's health issues.

FG meetings in the district of Marcará included participants with very particular affiliations. One FG included people affiliated with the program *Pensión 65*, a non-contributory pension plan for elderly people living below the poverty level. A second FG included a mother affiliated with the program *Juntos*, a conditional-cash-transfer (CCT) program directed to mothers with school-aged children living in poor and rural districts.

III.2.B.i Focus Groups and in-depth interviews with local residents.

All FG discussions started with questions about the most common diseases observed in the area. Although results were consistent with those observed in Canta, participants indicated that the incidence of many diseases was lower than those observed in the studied Lima districts. Cold and flu were noted as the most common diseases, largely associated with seasonal changes and weather conditions. Among the elderly, bone and joint related problems were cited, including arthritis and muscular problems, mostly linked to cattle and farming work. Children's most common diseases included anemia and diarrhea, however, participants stated that their incidence has been decreasing as a result of the important public health sector intervention programs. Gastrointestinal problems such as gastritis, as well as allergies and diabetes problems were also mentioned as minor problems that people in the region experienced.

Somewhat disturbing, FG discussions evidenced consensus around the overall health deterioration of the population over the past years. Participants argued that new diseases are emerging in the Marcará population as *"the people used to be healthy, there was not cancer or gastritis"*. Most participants attributed these changes to the pollution that the mining industry causes, also affecting the quality of their crops, the air conditions, as well as the water quality. These issues have pushed more farmers into using fertilizer and insecticides to cope with the appearance of new crop diseases:

I: Gold and silver. And this mine has brought you health problems?

P3: Yes

Group: Yes

P3: And not only our health. Our crops too. Because of the crop diseases

I: The crops too

P3: Yes...the harvest used to be abundant, but now it has diminished because of crop diseases

I: So the mines...

P3: They bring diseases

I: The mine has brought diseases to your crops

P3: Yes

I: What has changed? Have the crops changed because of the mine? Are there trees that no longer bear fruit...?

Group: They don't. They don't give fruits, they've died

P5: There are a lot of crop diseases.

Marcará – Focus Group N°1

The majority of participants had some information regarding the impact of the mining industry in their areas, mainly discussing their concerns about the environmental effects on their regions. Indeed, participants indicated that the overall health of the population in the region is worse, largely because of air and water pollution issues. In addition, the environmental effects of mining have directly affected the quality of their crops and emergence of new diseases, including respiratory diseases and lung cancer, largely unusual prior to the mining boom in their areas.

FG discussions continued focusing on the topic of quality of medical services in local healthcare centers. Participants described a similar path as that observed in Canta (see annex F for a detailed description of the path Mancos and Marcará would commonly follow to access health services). Participants indicated that the Mancos local healthcare center provided dentist, obstetric / gynecological (OB/GYN), and pediatric services as well as a small pharmacy and laboratory services for routine analyses. The Marcará center provided dentist, OB/GYN, and pediatric services. In addition, patients are routinely referred to the Huaraz district hospital, particularly during their bi-monthly health campaigns. Overall, participants perceived the services provided at the Victor Ramos hospital as good, largely based on the connection that patients could have with their doctors.

Overall, participants indicated that medical services in local healthcare centers were perceived as scarce and wide-ranging in quality, largely dependent on the quality of the doctor on call. The main complaints were the unavoidable (lengthy) wait times to be treated or even to get an appointment, the lack of medicines to get treatments, and the quality of available doctors. Participants reported that emergency room services or private polyclinics were the only option to get access to medical services or a faster treatment. In addition, participants also discussed the main issues of lack of medical supplies:

I: You have the service but you have to buy the medicine.

P3: Yes, or they give you ibuprofen

I: Ibuprofen they always have

(...)

P2: Other kind of medicine they don't have

I: So the service is working but when you need medicine, they don't have it

P6: They never have medicine

Marcará – Focus Group N°2

Concerns regarding the quality of doctors included high doctor rotations, language barriers (e.g. non-Quechua speakers) particularly in non-Spanish speaking areas, where discrimination problems were present, particularly towards people with lower levels of education or residents from isolated villages. Participants described bad experiences including poor bedside manners from elderly doctors, nurses refusing to provide healthcare services to patients arguing in one case that “[the

daughter] looked healthy to be treated, and that she should wait until the girl would get worse”, or doctors refusing to admit and to treat a patient arguing that the patient was “*faking the symptoms*”, when in fact the person was ill. Other FG participants described how nurses discriminated against low educated women¹⁴ or those coming from more isolated areas:

P4: With other people it's all good but when someone from more isolated areas arrives they start to...

I: They discriminate against them?

P4: Yes

P2: Because of their “pollera” [typical Andean skirt]

P3: I was not able to go to school, and they ask you, how old are you?, how long did you go to school? Do you know how to sign? When is your birthday? I do not tell them. Don't you know how to sign? You have to learn...

Mancos - Focus Group N°2

FG participants reported that the local health care center had long waiting times and limited hours of operation, from Monday to Saturday, from 7 am to 7 pm, and close on Sundays. Also they said that doctors and nurses do not comply with their work schedules. Very frequently the only person on call during the night shift was a medical technician, who would normally contact a doctor via cell phone in case of emergencies, but patients will frequently be sent to a larger hospital if the doctor could not see them. In those cases, patients will be responsible to pay an additional “transportation/gas fee” to use the ambulance, even though, participants indicated that insurances commonly covered ambulance services. As a participant describes “*When you don't know your rights because once I was sick and I told them I had never paid for the ambulance. But they say the government send gasoline, driver, everything. But if people don't know this, they charge them*”. Participants also disclosed cases of nurses stealing medical supplies, to sell them to private pharmacies or to charge a “fee” to patients outside the healthcare centers:

I: You have to wait for your turn

P6: Yes and very early, since 3 am to be able to get a spot.

P7: In Huaraz they steal the medicine. The nurses steal.

I: The nurses take the medicine and sell them later?

P7: They do not provide the service because the doctors in Huaraz are awful

I: They are terrible

P2: Yes, they sell our medicine. You have to check carefully your prescriptions, because they [the nurses] will take it and then sell it.

I: The nurses sell the medicines outside [the facilities]

P6: They [the doctor] will prescribe some medicine and the nurses will fill up the prescription, but some times they will not give you the full prescription and they will keep some of it and they will take it.

Marcará – Focus Group N°1

In addition, FG participants indicated that many doctors working in public hospitals or healthcare centers have started to open private practices, such as private polyclinics. These doctors would mislead patients about their insurance coverage for certain procedures or analyses, coercing them

¹⁴ Education, in remote villages, is commonly limited to men, because of social restrictions (based on the traditional breadwinner male model) and the high expense that it represents for their families.

into using their private practice services. Access to private services was available mostly in Huaraz, the capital of the department. Participants indicated that districts such as Marcará and Mancos did not have access to any private healthcare facilities in these areas. Overall, private healthcare services were regarded as higher quality, including procedures, analyses, access to specialists, and speed of test results.

Similar to practices found in Canta districts, participants indicated that it is also a common practice to treat illnesses with traditional herbal medicine or to use self-medication. Pharmacies are also used as frequent places to get simple diagnoses and easy access to medications to alleviate certain symptoms to be able to go back to work. Participants reported that, even those who decide to go to see a doctor, taking their time to wait for their appointments and diagnoses, and receiving prescriptions directly from their doctors, would commonly choose to go to a pharmacy to privately purchase their prescription, as healthcare centers are always short on medical supplies and they perceive pharmacy medicine to be more effective than the ones they get from the health centers:

I: Ok. And there, you ask the pharmacist? Or do you have a previous prescription?

P7: They give it at the healthcare center but if they don't have [the medicine] we go to the pharmacy and it is better

(...)

P7: At the pharmacy they have imported medicine

Marcará – Focus Group N°1

The next component of the FG discussions focused on visible changes on the overall health system and in particular health infrastructure. Participants explained that access to both the SIS and the EsSalud public insurance system have provided access to medical care to people who previously had not had access to them and had been forced to spend large amounts of money, likely borrowed, for consultations and prescriptions. However, FG participants' perceptions were pessimistic, reporting no major improvements on infrastructure. Although, they acknowledged that some new healthcare facilities had been opened in more remote areas, many of them were only staffed with nurses or medical technicians. Many participants recognized the difficulties involved in opening new healthcare facilities or upgrading the existing ones, as the Ministry of Health imposes many rules that prevent those things from happening. Although the public healthcare options have not improved, participants indicated that the private healthcare supply in Huaraz had increased. These private facilities, however, do not take public SIS or EsSalud insurances, leaving patients with large out-of-pocket expenses.

The next component of the FG discussion focused on perceptions of the role that municipalities played on any improvements in local healthcare services. Overall, participants said that the municipality did not invest on any healthcare improvements, arguing that the municipal government assigned a lower priority to this sector. The general perception regarding their local authorities was a widespread sense of discontent and major concerns about corruption problems and preferential treatment for certain districts in the region, arguing that *“the current mayor is not from here. He is from other town, so he doesn't worry about us”* (Mancos – Focus Group N°3). Participants also evidenced some awareness about the canon laws and the canon revenues that their districts could receive. They, nevertheless, hardly receive any information regarding the actual canon budget amount and allocation, or any updates on planned projects, except during information meetings held twice a year.

The final component of the FG discussions was centered on gender issues, particularly focusing on women's health and unmet needs. Participants mentioned that although access to gynecological services is limited in their districts, commonly having to travel to Huaraz to see a specialist, there have been, more recently, traveling campaigns offering gynecological and pediatric services (check-ups and various tests) that have been provided in their own villages or districts. Participants perceived some improvements, acknowledging that before women only had access to midwives and no medical equipment for labor and delivery services. In addition, participants mentioned that many new private practices are also offering more specialized services, such as gynecological services.

Information offered by healthcare providers who participated in the FG interviews, evidenced that although pre-natal, delivery, and post-natal services are commonly offered in local healthcare centers, many women do not seek these services and choose to use midwives services instead. As a result, a significant number of post-partum complications, including infections, or even deaths, are observed. In addition, many women are forced to go back to work right after giving birth, leading to many post-natal complications.

III.2.B.ii In-depth interviews with local government authority

In Ancash, two IDIs with local government's authorities were conducted. Both IDI participants worked for the Marcará municipality. The first participant was in charge of the "Vaso de Leche" program and managing sewage services, and the second participant worked on other public services. Ancash IDIs results were consistent with those observed in Canta, showing that municipality authorities do not have enough information about the municipality funds and how budgets were allocated. They only had information about the specific projects and areas they worked on.

Regarding the canon revenues, participants evidenced the lack of information around the role of the municipality managing or even receiving the canon. IDI participants were not even fully clear on the type of canon their municipalities received. Indeed, IDI participants' lack of information was evidenced as participants stated that their municipality (Marcará) no longer received any mining canon revenues, and that the municipality only received Foncomun revenues. In reality, the Marcará municipality not only was eligible to receive, but in fact, they received a mining canon, as mines are currently operating in that area.

Regarding budget allocation decisions and priorities, both IDI participants expressed their increasing interest to improve the investment on healthcare services. They supported the idea of increasing the number of doctors, nurses, and medical technicians available in local healthcare centers. Indeed, one of the IDI participants indicated that in recent months, some municipality funding had been allocated to increasing the number of medical personnel in local healthcare facilities. They also discussed the importance of investing on better medical equipment in local healthcare facilities in order to reduce transportation costs to hospitals located in larger cities or towns. In addition, they also emphasized the need to increase investment on health services that would target child and elderly malnutrition in their areas.

III.3. Interviews with experts

In-depth interviews with experts in the area of health research supported the idea that, despite recent improvements in health programs, the overall health situation in the country has not improved considerably, particularly when compared to similar countries in the region (see annex H for the transcription and translation of the full interviews). Particularly, there is an urgent need to improve the access to health services in more isolated, rural areas of the country. This supports the results found during FG and IDI with local residents, where participants would argue that even among those who could have access to local health centers/posts, these services are frequently time-consuming, low quality, and do not provide specialized services.

A second topic discussed with health research experts was the allocation of mining royalties. Experts indicated that a structural concern about the mining royalties redistribution was their exclusive use for infrastructure projects because “*(They) could build a hospital but not have the means to make it work.*” Experts also indicated that the mining canon budget could be used, for example, in indirect ways to improve the health such as “*improving sanitation and drinking water supplies*”, authorized uses for this income.

Experts agree that newly implemented social programs were the main achievement in the public health sectors. Unfortunately, poor medical service coverage remains a large issue, both for public and private health providers. The health situation inside the country, in particular, was perceived as precarious, showing large quality and coverage gaps, in comparison to Lima and private providers. These results are consistent with the information presented by the FG and IDI local resident participants. For example, participants from the Ancash region indicated that many people would opt for private health providers (mostly located in the province capital). Despite having access to free health care services, patients would choose to pay for private care as it is usually faster, higher quality, and they have a good supply of medicines (even perceived as more effective).

An additional issue discussed with the group of experts is the issue that the health care system in Peru is highly centralized. For example, Lima has a large variety of both public and private providers that meet the demand for specialists and coverage, particularly for the lower income population. Experts indicate that doctors across all specialties would prefer to be working in Lima, expecting to get higher earnings, frequently working in private practices or working on second jobs.

Regarding gender inequality issues in health care access, experts indicated that women remain vulnerable, as neither the public nor the private sectors are able to fully cover their health care needs. Getting access to regular gynecological exams or to pediatric services becomes highly complicated, as many areas in the country do not have local health care centers/posts, and even if they do, they might not have the proper medical personnel or would lack the medical supplies or equipment to run tests. These issues are particularly critical when trying to provide pre-natal, labor and delivery, and post-natal services, as well as regular pediatric services (including check ups and vaccinations) for infants and young children. In many cases, the long trip to get access to medical care (either going to Lima for Canta residents or going to Huaraz for Mancos and Marcara residents) is not an option, as they in most cases, patients would require immediate medical attention or they just could not go through the long journey, many times traveling by foot for long distances in order to get access to other modes of transportation.

Experts indicate that mining royalties could be used to directly fill the infrastructure gap through investment. This investment could indirectly improve the health situation, as some local government resources previously used on infrastructure could be re-allocated into human capital, health technologies, medicines and health supplies, etc. These indirect ways to invest on health, as the experts suggested, could have a major contribution on the improvement of health outcomes and the overall well being of these populations. The experts state that important steps need to be taken, as local government investment's priorities are not clear. In addition, supporting results from FG and IDI from local residents, experts indicate that it is clear that the general population does not truly know how resources are being spent, leading to a general perception of poor advances toward a better health care system.

IV. Conclusions

This study presents results of a mixed methods approach that use a broad number of gender-specific health measures in order to evaluate the impact of public expenditure in Peru on women's health outcomes. In particular, we focus on mining royalties in order to take advantage of the causal interpretation that this allows by employing quasi-experimental conditions (i.e. mining revenues externally determined by international prices), which allows us to study the impact of greater revenues on health outcomes for women.

Overall, our mixed methods approach is rather consistent. On the one hand, our quantitative estimates suggest positive results that show that increased public expenditure, measured in the form of increased mining royalties, have had positive impacts on health-related outcomes for women by improving their levels of hemoglobin, reducing anemia levels, improving household wealth, and reducing the number of births in the previous five years.¹⁵

On the other hand, we also find that producer districts, meaning, those that receive more public expenditures in the form of royalties, are more likely to show greater chances of anemia, negative on wealth and positive on births. One explanation to these results is, as largely described during our focus groups discussions, that pollution related to mining production in air, water, and soil, may be overpowering any potential income effects resulting from the additional mining revenue transfers in terms of health improvements among women.

Qualitative findings provide more detailed information regarding the role of public expenditure on the health situation of the population. One observed effect of the greater public expenditure in treatment group districts is the larger supply of healthcare providers both public and private, as well as greater access to ambulatory services in isolated areas. This larger healthcare supply not only has improved the access but also the quality and broader variety of health services in these areas. A second factor discussed during the qualitative interviews was the growing access to public health insurance (SIS). This social program has provided individuals with access to modern health services.

¹⁵ However, when adjusting by altitude, we find negative impacts on hemoglobin. Further research would be necessary in order to more clearly uncover the relationship between expenditures and hemoglobin.

Overall, our qualitative results show that women are still facing greater health disadvantages, as regular preventive and specialized OB/GYN services are still difficult to access. Despite the perceived improvements on infrastructure, medical equipment, ambulatory services, access to public insurance and free services, it is clear that more needs to be done. In-depth interviews with experts support this statement, proposing some solutions to public expenditure. For instance, experts suggest that mining canon revenues could be used indirectly to improve health outcomes, such as for sewage, health centers, running water, and the like.

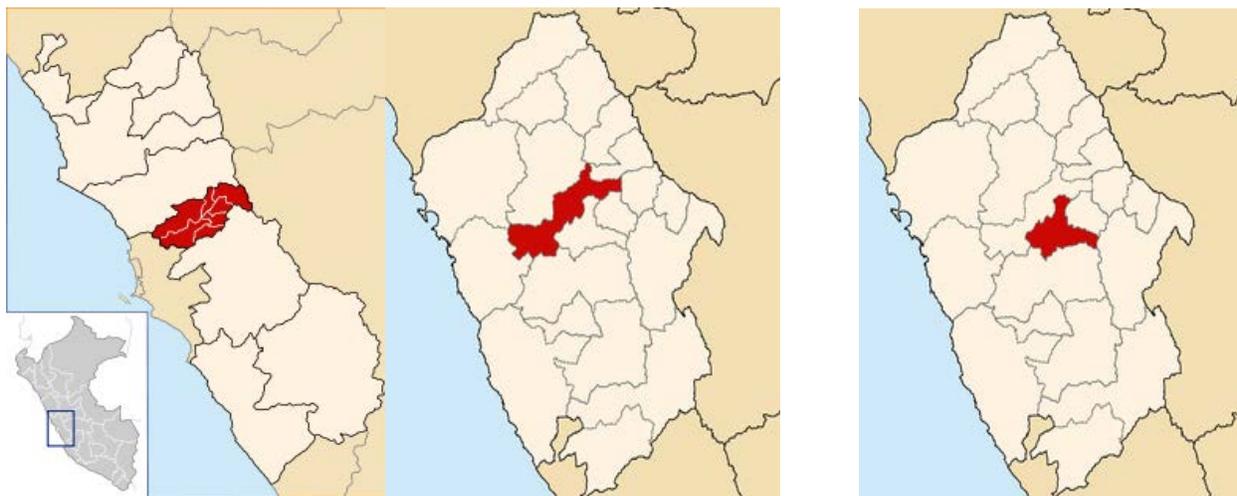
To summarize, the objectives of this study were to analyze key welfare consequences of an increase in public expenditures due to mineral windfalls on validated gender-specific performance indicators in the health sector in Peru in order to estimate empirical patterns, and in particular, the causal impact of public expenditures on such gender-specific measures. We study the causal impact of public expenditures on the efficiency of gender-specific performance indicators with the aim that these estimates will serve as part of a toolkit of benchmark measures that may be employed by practitioners. To do this we also validate the usefulness of the selected gender-specific performance measures with stakeholders as well as with beneficiaries. Presenting our causal estimates and main qualitative results, we organized technical meetings with universities, government and municipal officials, and think tanks and discussed manners in which our proposed toolkit benchmarks may strengthen practices and processes integral to improving PFM in the LAC region. Annex I describes coordination and dissemination activities.

Annex A: Qualitative Component: Description of Geographic Areas Selected for Focus Groups and In-Depth Interviews.

Canta is a province in the Lima region, located approximately 105 kilometers northeast of Lima city, located in the Chillón River Valley at an altitude of 2,837 meters above sea level. Three villages were selected as control group cases, to focus group interviews were conducted in Obrajillo (1 focus groups), Pariamarca (3 focus groups) and Canta (2 focus group). The treatment group comes from the region of Ancash, more specifically the provinces of Carhuaz and Yungay.

The province of Carhuaz is located in the Andean mountain chain “*Cordillera Blanca*”, at 2,645 meters above sea level, populated by a large percentage of indigenous habitants. The Yungay province is also located in the center region of the Huaylas Alley (“*Callejón de Huaylas*”), at 2,458 meters above sea level, relatively close to the Santa River. Yungay holds a larger urban population of around eight thousand people. Two districts were selected to conduct focus groups, the Mancos (Carhuaz, 3 focus groups) and the Marcará (Yungay, 3 focus groups) districts. See figure B1 presenting the specific location of the selected provinces.

Figure A 1: Location of Selected Provinces: Canta, Yungay, and Carhuaz



Source: Wikipedia

Annex B: Quantitative Component: Variable Description

Table B 1: Toolkit Health Performance Measures (Gender-Based Outcomes)

Indicator 1

Precise definition	<i>Public expenditures in health at the municipal level, adjusted by the share of female population in the corresponding municipality.</i>
Unit of measure	<i>Soles (national currency)</i>
Data disaggregation	<i>Data are obtained disaggregated at the municipal level, approximately 2000 municipalities in Peru.</i>
Rationale	<i>Basic measure of gender-specific impact. “Umbrella” measure that will help capture any basic gender bias when applying econometric method.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Ministry of Finance of Peru and Registro Nacional de Municipalidades</i>
Frequency and timing	<i>Annual, as many years as possible (2000-2014)</i>
Budget implications	<i>Data collection of this series is very labor intensive and requires heavy coordination and collaboration from authorities.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality.</i>
Data limitations and actions to address them	<i>Possible delays due to bureaucratic complications, but we don't envision not being able to obtain them.</i>
Data use	<i>Ready for statistical use (Stata)</i>

Indicator 2

Precise definition	<i>Household expenditures in health related items by gender</i>
Unit of measure	<i>Soles (national currency)</i>
Data disaggregation	<i>Data are obtained disaggregated at the household level, approximately 100,000 data observations for the period needed (2000-2014).</i>
Rationale	<i>Basic measure of gender-specific impact. This measure that will help capture any basic gender bias at the household level when applying econometric method.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Instituto Nacional de Estadística e Informática (INEI)</i>

Frequency and timing	<i>Annual, as many years as possible (2000-2014)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis is somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality.</i>
Data limitations and actions to address them	<i>We do not envision complications.</i>
Data use	<i>Ready for statistical use (Stata)</i>

Indicator 3

Precise definition	<i>Affiliation to the public health system (ESSALUD) at the household level, by gender</i>
Unit of measure	<i>Dummy variable (yes =1)</i>
Data disaggregation	<i>Data are available at the individual level within a household.</i>
Rationale	<i>General performance measure of public expenditures on health related indicator.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We do not envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Health Indicator: Water Quality (Indicator 4 to Indicator 14)

Precise definition	<p>(i) Household water access at home, by gender</p> <p>(ii) Household water access at home, by number of children and gender</p> <p>(iii) Water access to drink, by gender of household head (public pipes, private well, river, rain, water truck)</p> <p>(iv) Water access to use, by gender of household head (public pipes, private well, river, rain, water truck)</p> <p>(v) Hours of water access by gender of household head</p> <p>(vi) Water access cuts during the last week or two weeks by gender of household head</p> <p>(vii) Time to fetch water and gender or the one who does it.</p> <p>(viii) Habits regarding water consumption (direct consumption, boil, use of chlorine, special filter, cloth filter, placed under sunlight, other), who takes care of it?</p> <p>(ix) Drinking water kept in special container with cover?</p> <p>(x) Household pays for water? Differences between gender</p>
Unit of measure	<p>(i), (ii), (vii), (ix), (x) Dummy variable, yes =1</p> <p>(iii) and (iv) Categorical variable, from 1 to 6</p> <p>(v) Hours per day</p> <p>(vi) Number and estimate in minutes</p> <p>(viii) Categorical variable, from 1 to 7</p>
Data disaggregation	Individual level within a household
Rationale	Basic indicators on water use and consumption by gender provide a good basic indicator related to health issues, as a key source of illness in Peru is water-quality or sewerage related.
Responsible individual	Alberto Chong
Data source	Instituto Nacional de Estadística e Informática (INEI)
Frequency and timing	Annual data, 2000-2014
Budget implications	Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.
Method of data acquisition	Data are free
Data quality assessment procedure	Official data, high quality.
Data limitations and actions to address them	We do not envision complications
Data use	Ready for statistical use -Stata

Basic Health Indicator: Sanitation at Home (Indicator 15 to Indicator 18)

Precise definition	<p>(i) Type of sewerage system, by gender of head of household (internal, external, shared, other)</p> <p>(ii) Sanitation infrastructure is exclusive for home, by gender of head</p>
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	<i>(iii) Where do household members wash their hands? (inside the home, outside the home with water pipes, outside the home, other) By gender (iv) Garbage treatment, by gender of head of household (pick up once a week, household take it out, dump in open space, other)</i>
Unit of measure	<i>(i) Categorical variable, from 1 to 4 (ii) Dummy variable, yes =1 (iii) Categorical variable, from 1 to 4 (iv) Categorical variable, from 1 to 4</i>
Data disaggregation	<i>Individual level within a household</i>
Rationale	<i>Basic indicators on sanitation adjusted by gender provide a good basic indicator related to health issues, as a key source of illness in Peru is water-quality or sewerage related.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Health Indicator: Weight and Height (Indicator 19 to Indicator 21)

Precise definition	<i>(i) Height for each family member (ii) Weight for each family member (iii) Body mass index for each family member</i>
Unit of measure	<i>(i) Kilos (ii) Centimeters (iii) index</i>
Data disaggregation	<i>Individual level within each household</i>
Rationale	<i>Universally accepted indicator related to health.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>

Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Health Indicator: Hemoglobin (Indicator 21 to Indicator 22)

Precise definition	<i>(i) Hemoglobin levels for each family member (ii) Hemoglobin levels for pregnant women</i>
Unit of measure	<i>(i) Index (ii) Index</i>
Data disaggregation	<i>Individual level within each household</i>
Rationale	<i>Universally accepted indicator related to health, in particular, related to anemia. Anemia is one of the most predominant health problems in Peru, and it is linked to a broad set of additional health (and educational) issues for boys and girls, as well as for adults.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Health Indicator: Iodine in salt (Indicator 23)

Precise definition	<i>(i) Iodine in salt</i>
Unit of measure	<i>(i) Index</i>
Data disaggregation	<i>Household level</i>

Rationale	<i>Universally accepted indicator related to health, in particular, related to thyroid problems, mental imbalances, fetal hypothyroidism, and more recently, even autism. Lack of iodine is a predominant health issue in Peru, in particular in rural areas.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Health Indicator: Residual Chlorine in Water (Indicator 24)

Precise definition	<i>(i) Chlorine in drinking water, adjusted by water consumption per family member</i>
Unit of measure	<i>(i) mg/ liter</i>
Data disaggregation	<i>Household level</i>
Rationale	<i>Chlorine in water is a highly efficient way of killing bacteria and germs. Lack of chlorine is linked to a host of maladies.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Individual Health: Hypertension (Indicator 25)

Precise definition	<i>(i) Has blood pressure in any health public dependency been measured? – individual level, each adult household member</i> <i>Possible sub-measures:</i> <i>(a) Have you been diagnosed with high blood pressure? By public or other institution. If yes, how long have you had high blood pressure</i> <i>(b) Has a public sector dependency helped with medications?</i>
Unit of measure	<i>(i) Dummy, yes =1</i>
Data disaggregation	<i>Individual, each household member</i>
Rationale	<i>Basic health indicator related to cardiovascular system</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES- Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Individual Health: Blood Glucose Level (Indicator 26)

Precise definition	<i>(i) Has your blood glucose level been measured in any health public dependency been measured? –individual level, each adult household member</i> <i>Possible sub-measures:</i> <i>(a) Have you been diagnosed with diabetes? By public or other institution. If yes, how long have you had high diabetes</i> <i>(b) Has a public sector dependency helped with medications?</i>
Unit of measure	<i>(i) Dummy, yes =1</i>
Data disaggregation	<i>Individual, each household member</i>
Rationale	<i>Diabetes is becoming a predominant illness in Peru.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES- Instituto Nacional de Estadística e Informática (INEI)</i>

Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Health Risk Factor: Smoking (Indicator 27)

Precise definition	<i>(i) Have you smoked in the last 30 days? individual level, each individual household member who is 15 years old or older. Possible sub-measures: (a) When was the first time that you smoke? (b) Do you smoke daily? How many cigarettes?</i>
Unit of measure	<i>(i) Dummy, yes = 1</i>
Data disaggregation	<i>Individual, each household member</i>
Rationale	<i>Smoking is still generalized in Peru.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES- Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Health Risk Factor: Alcohol (Indicator 28)

Precise definition	<i>(i) Have you drunk alcohol in the last 30 days? individual level, each individual household member who is 15 years old or older. Possible sub-measures: (a) When was the first time that you drank alcohol? (b) Do you drink daily? (c) What type of products do you drink? (beer, wine, rum, others)</i>
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Unit of measure	<i>(i) Dummy, yes =1</i>
Data disaggregation	<i>Individual, each household member</i>
Rationale	<i>Alcohol consumption is generalized in Peru.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES- Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Individual Health: Cervical Cancer Prevention and Control (Indicator 29 to Indicator 33)

Precise definition	<i>(i) Have you heard of Cervical Cancer? (ii) Did you know that a virus can cause such cancer? (iii) Have you checked yourself in a public health dependency? (iv) When was your last mammography? (v) When was your last papanicolaou test?</i>
Unit of measure	<i>(i)-(iii) Dummy variable, yes =1</i>
Data disaggregation	<i>For females within households</i>
Rationale	<i>Comprehensive indicators on female cancers and role of public health.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES- Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>

Data use	<i>Ready for statistical use -Stata</i>
Basic Individual Health: Tuberculosis (Indicator 34 and 35)	
Precise definition	<i>(i) Have you heard of tuberculosis? (ii) If so, do you know if it can be cured?</i>
Unit of measure	<i>(i) and (ii) Dummy, yes =1</i>
Data disaggregation	<i>Individuals in household</i>
Rationale	<i>Tuberculosis is a prevalent illness in rural areas of Peru.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES- Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Individual Health: Mental Health (Indicator 31-33)

Precise definition	<i>(i) In the last two weeks, have you (a) had little interest in doing things; (b) been sad and without hope; (c) slept well; (d) felt tired with no apparent motive; (e) had little appetite or too much appetite; (f) had difficulties to concentrate. (ii) In the last 12 months have you been treated for any of the things mentioned above in a public health dependency? (iii) Have you been prescribed medicines?</i>
Unit of measure	<i>(i) Categorical variable, which range from 1 to 7 (ii) Dummy variable, yes =1 (iii) Dummy variable, yes =1</i>
Data disaggregation	<i>Adult individuals from households</i>
Rationale	<i>Basic indicator of mental health and link to public health infrastructure.</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES-Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>

Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Basic Individual Health: Measurement of Blood Pressure (Indicator 34)

Precise definition	<i>(i) Blood pressure measurement to members of household, ages 15 and older.</i>
Unit of measure	<i>Systolic and diastolic measurements.</i>
Data disaggregation	<i>Individuals of household</i>
Rationale	<i>Coronary issues</i>
Responsible individual	<i>Alberto Chong</i>
Data source	<i>ENDES- Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Quality of Hospitals in the Public Sector (Indicator 35 to Indicator 40)

Precise definition	<i>(i) Participation in demonstrations by Ministry of Health? (ii) Have you received a demonstration by the Ministry of Health at home? (iii) In the last 12 months, how many demonstrations by MH have you attended? (iv) In the last 12 months, how many times have MH officials have come to your household? Have they looked for the men or women at home?</i>
Unit of measure	<i>(i), (ii) Dummy variable, yes =1 (iii) number, (iv) number</i>
Data disaggregation	<i>Individual members of household</i>
Rationale	<i>Basic indicators of health sector.</i>
Responsible individual	<i>Alberto Chong</i>

Data source	<i>ENDES-Instituto Nacional de Estadística e Informática (INEI)</i>
Frequency and timing	<i>Annual, 2000-2014 (not all years available)</i>
Budget implications	<i>Data collection of this series is not difficult. Data cleaning, processing, and analysis may be somewhat data intensive.</i>
Method of data acquisition	<i>Data are free</i>
Data quality assessment procedure	<i>Official data, high quality</i>
Data limitations and actions to address them	<i>We don't envision complications.</i>
Data use	<i>Ready for statistical use -Stata</i>

Table B 2: Variable Definition

Variable	Definition
Gender-Related Outcome Variables	
Hemoglobin level	Continuous variable that measures the level of hemoglobin of the woman in grams per deciliter
Hemoglobin level adjusted by altitude	Continuous variable that measures the level of hemoglobin of the woman in grams per deciliter adjusted by the altitude of the household
Anemia	Dummy variable, 1 if woman reports being anemic (regardless of severity - severe, moderate, mild).
Births	Continuous that measures the number of children the woman gave birth to in the last five years.
Wealth index	Categorical variable that denotes the wealth level of the household through its assets: 1=poorest, 2=poorer, 3=middle, 4=richer and 5=richest
Treatment Variables	
Canon larger than national average	Dummy variable, 1 if the canon revenues are higher that the national average for each specific district and year.
Canon Receiver	Dummy variable, 1 if the district received canon transfers
Canon Producer vs. other	Dummy variable, 1 if the value of one if the district is a mineral producer and zero otherwise
Canon Producer vs. receivers	Dummy variable, 1 if the district is a mineral producer and zero if the district received canon revenues
Control Variables	
Educational level	Continuous variable that measures the woman's number of years of education
Insurance holding	Dummy variable, identifies women that does not have any health insurance
Gender	Dummy variables, identifies if the household's head is male
Age	Continuous variable, age in years of each woman
Pregnancy status	Dummy variable, one if the woman is currently pregnant
Household floor	Dummy variable, one if the household's floor is earth/sand
Water facility	Dummy variable, one if the household's water facility is unhealthy
Underage children	Number of children aged 5 years or younger.
Year	Dummy variables, for each year 2007 – 2014.
District	Dummy variables, for each district by the ubigeo code.
Province	Dummy variables, for each province by the ubigeo code.

Source: ENDES. Compiled by authors.

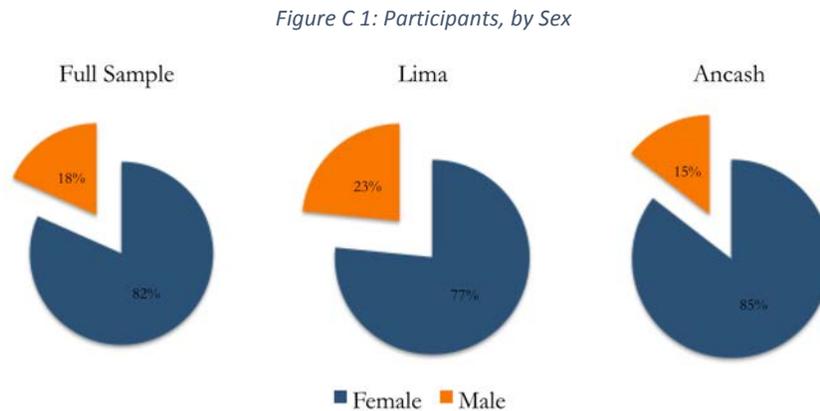
Table B 3: Summary Statistics

Variable	N	Std. Dev.	Mean	Min	Max
Outcome Variables					
Hemoglobin level	168,883	136.60	18.00	0.00	479.00
Hemoglobin level altitude adjusted	168,906	128.23	17.26	11.00	998.00
Anemia	201,812	0.18	0.39	0.00	1.00
Wealth index	201,812	2.89	1.33	1.00	5.00
Births	198,051	0.41	0.63	0.00	4.00
Treatment Variables					
Canon bigger than mean	201,812	0.21	0.41	0.00	1.00
Canon Receiver	198,971	0.87	0.33	0.00	1.00
Canon Producer vs other	201,812	0.08	0.28	0.00	1.00
Canon Producer vs receivers	201,812	0.08	0.28	0.00	1.00
Control Variables					
Educational level	201,586	9.12	4.21	0.00	17.00
Insurance holding	144,412	0.39	0.49	0.00	1.00
Gender	201,812	0.77	0.42	0.00	1.00
Age	198,051	30.47	10.05	15.00	49.00
Pregnancy status	198,051	0.04	0.20	0.00	1.00
Household floor					
Water facility	201,812	0.37	0.48	0.00	1.00
Underage children	201,812	0.08	0.27	0.00	1.00

Source: ENDES. Compiled by authors.

Annex C: Focus Group Sample: Basic Demography Description

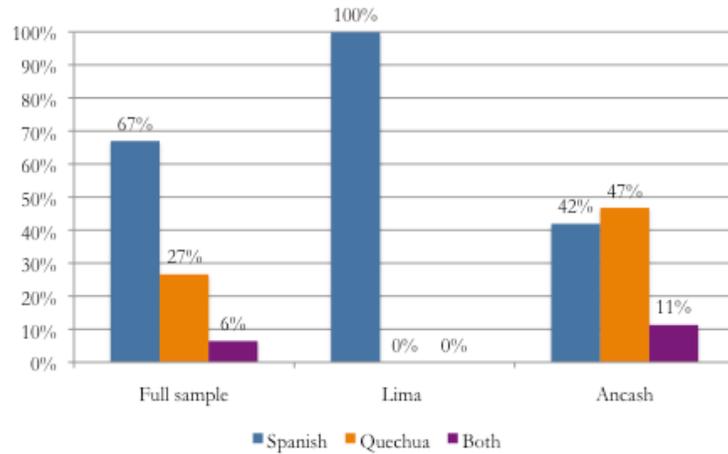
Figure C1 presents the distribution of the study sample by sex. As originally proposed and designed in the sample methodology, results show that the large majority of participants, both for the Lima and Ancash, are women. Female participants represent around 80 percent of the total participants, with Lima showing a slightly smaller percentage, compared to Ancash.



Source: Authors. Data compiled by authors.

Figure C2 describes the distribution of participants by mother tongue, used as a proxy of racial background (i.e. participants whose mother tongue is Quechua, are considered indigenous). Estimates indicate that the percentage of indigenous FG participants in Lima is zero, whereas in Ancash, is around 58 percent, when combining participants who only spoke Quechua (47 percent) or both Spanish and Quechua (11 percent). These distributions are consistent with the observed population distribution in Ancash and Lima, where the population in Ancash holds a larger percentage of indigenous habitants, compared to Lima.

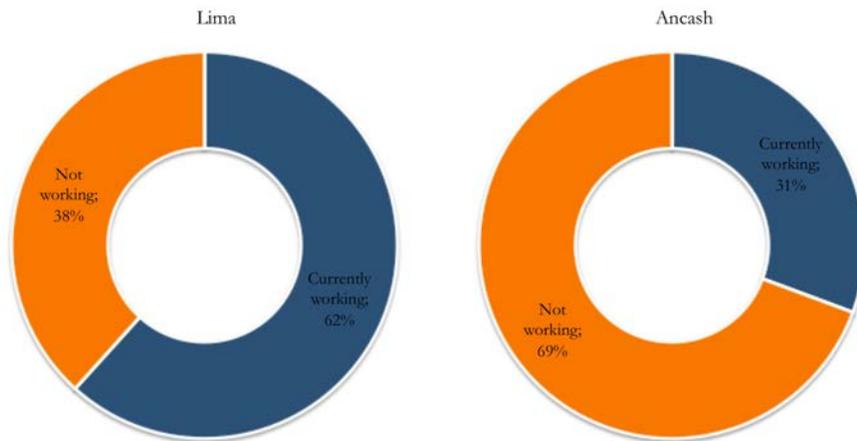
Figure C 2: Participant's Mother Tongue



Source: Authors. Data compiled by authors.

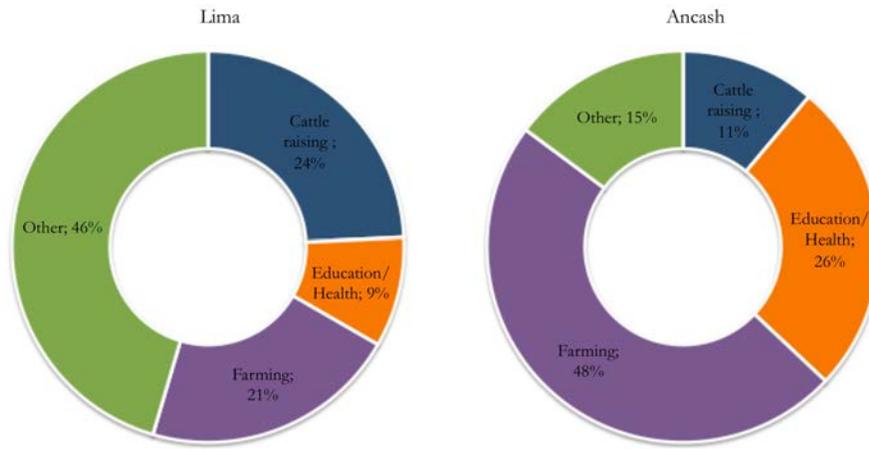
Figures C3 and C4 summarize the employment status and type of occupations observed among FG participants. Estimates indicate large differences between work status of Lima and Ancash district participants. Among Lima participants, the percentage of currently employed participants is 62 percent, whereas in Ancash, only 31 percent of participants report being currently employed. The main reasons provided by participants for not being currently employed were child care obligations, illnesses or disabilities, housework, old age issues.

Figure C 3: Percentage of Participants, By Location and Employment Status.



Source: Authors. Data compiled by authors.

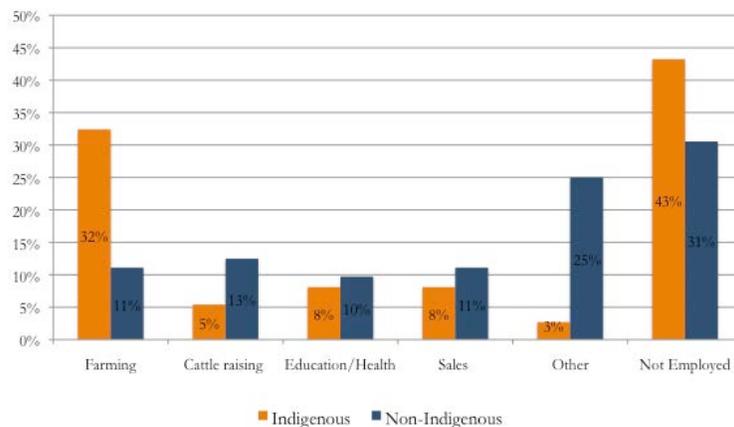
Figure C 4: Percentage Distribution of Employed Participants, By Location and Type of Occupation.



Source: Authors. Data compiled by authors.

Similarly, several differences are also observed between Lima and Ancash participants regarding the type of occupation held. Among Lima participants, the occupation with the largest percentage is “other” (46 percent), including occupations such as security personnel, municipality workers, construction workers, and non-specified occupations. Farming represents the occupation with the largest share of workers (48 percent) among Ancash participants, followed by education and health services (26 percent). These occupation distributions are consistent with the urban and rural characteristics of these populations. In addition, participants indicated that the majority of these occupations were heavily seasonal and, very frequently, informal.

Figure C 5: Percentage Distribution of Participants, by Race and Occupation (Full Sample)

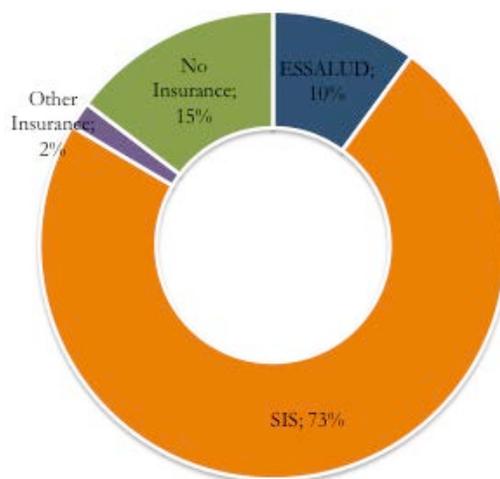


Source: Authors. Data compiled by authors.

Figure C5 describes the percentage distribution of participants by the type of occupation and their racial background (i.e. indigenous or non-indigenous, based on their self-report mother tongue information). Estimates indicate that indigenous participants are close to three times more likely to be working on farming, compared to non-indigenous participants. The opposite is true for cattle-raising, where non-indigenous participants are more than twice as likely to work on this occupation, compared to indigenous participants. Regarding other occupations (such as security personnel, municipality workers, construction workers, or housekeeping) are more than eight times more likely to be reported among non-indigenous participants than their indigenous counterparts.

In addition, indigenous participants report a greater percentage of not employed participants, compared to non-indigenous participants. A large percentage of the not employed participants reports choosing to stay at home, particularly among women, to take care of children and to do housework, reducing their chances to enter the labor market. These results are consistent with the traditional social norms among indigenous women, who are more likely to care for children as well as to work on household plots, largely for domestic consumption, leaving the paid work (largely seasonal) to men.

Figure C 6: Percentage Distribution of Participants, by Type of Insurance



Source: Authors. Data compiled by authors.

Note: Insurances include the Seguro Integral de Salud (SIS), Seguro Social de Salud (ESSALUD), other insurances include “Segunda Capa” and Oficina de Normalización Provisional (ONP).

Regarding their access to health insurance, a large percentage of participants reported having health insurance (around 85 percent), with similar percentages observed for Lima and Ancash participants (see figure C6). This significantly large percentage of insured participants is partially explained by the recent increase in the Seguro Integral de Salud (SIS) coverage that largely focuses on rural and poor and extremely poor districts. The people on this study’s participant districts largely qualify for these health insurance benefits. Figure 8 clearly presents this increase in coverage, showing that 73 percent of participants hold the SIS insurance. The second largest group of insured participants reports

being covered by EsSalud, which is a private-public mixed insurance, representing approximately 10 percent of participants. The insurance coverage and type of insurance distributions are very similar for both indigenous and non-indigenous participants.

Annex D: Qualitative Component: Full Set of Regression Analyses

This section presents regression results, testing all different exogenous/treatment variables (i.e. canon greater than national average, canon receiver, canon producer, restricted to canon-receivers-canon producer), as well as all women's health outcome variables (i.e. hemoglobin level, adjusted hemoglobin level, anemia, number of births, wealth index). In addition, various specifications were used using alternative types of fixed effects, using district fixed effects, province fixed effects, no-area fixed effects, and all regressions include time/year fixed effects. Also, all regression analyses use the different-in-difference (DID) model, using Ordinary Least Square (OLS) methodology. The full set of control variables was included on each regression (i.e. education, health insurance, household head's gender, floor of household, current age, pregnancy status, presence of children under age and the water facility).

Tables D1, D2, and D3 present results using the exogenous/treatment variable of canon revenues higher than the national average. The first table (D1) controls only for district fixed effects, the second (D2) for province fixed effects, and the third one (D3) does not control for any geographic location fixed effects. All tables presents five columns representing each of the women's health outcomes described above.

Table D1 suggests that having higher canon revenues at the district higher than the national average increased the levels of hemoglobin in women (column 1). This result also holds when we consider hemoglobin level adjusted by altitude (column 2), but with a weaker impact, also significant at the 1% significance level. The anemia variable is inversely correlated with the canon revenues, thus showing an effect of the canon revenues potentially reducing anemia through indirect channels like health infrastructure generation (column 3).

Table D 1: Difference-In-Difference Regression Analyses (District Fixed Effects)

Exogenous Variable: Canon revenues greater than national average

	(1)	(2)	(3)	(4)	(5)
Difference in Difference at district level through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
Canon revenues higher than national mean	1.868*** (0.411)	1.197*** (0.410)	-0.030*** (0.011)	-0.017 (0.031)	0.018* (0.009)
Education in single years	-0.014 (0.012)	0.022 (0.015)	-0.002*** (0.000)	0.072*** (0.001)	0.003*** (0.000)
Health insurance: don't have	-0.204** (0.084)	-0.084 (0.105)	0.001 (0.002)	-0.036*** (0.005)	-0.071*** (0.003)
Male household head	0.273*** (0.094)	0.106 (0.125)	-0.007** (0.003)	0.099*** (0.006)	0.043*** (0.003)
Floor of household: earth	0.076 (0.110)	-0.425*** (0.145)	0.007** (0.003)	-0.937*** (0.011)	0.014*** (0.004)
Current age - respondent	-0.028*** (0.004)	-0.034*** (0.005)	0.001*** (0.000)	0.008*** (0.000)	0.000*** (0.000)
Currently pregnant	-12.482*** (0.184)	-12.641*** (0.186)	0.097*** (0.006)	-0.111*** (0.010)	0.021*** (0.006)
Number of children 5 and under	-0.865*** (0.053)	-0.923*** (0.060)	0.020*** (0.002)	-0.078*** (0.003)	0.549*** (0.003)
Unhealthy water facility	0.535** (0.235)	-0.535** (0.211)	0.009 (0.006)	-0.399*** (0.019)	0.033*** (0.007)
Constant	146.9*** (0.527)	137.5*** (1.904)	0.086*** (0.014)	2.403*** (0.046)	0.009 (0.022)
R-squared	0.451	0.061	0.038	0.727	0.506
District FE	Yes	Yes	Yes	Yes	Yes
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

The effect of the national canon revenue higher than the national average on the household wealth index was negative, but non-significant (column 4). This result could indicate that many municipalities use canon revenues on infrastructure projects. In addition, mining projects tend to be placed in districts with high poverty levels like the rural highlands. The impact of the district receiving canon income greater than the average had a positive, but only significant at the 10%, impact on the number of births that women had during the past 5 years. This relation could be showing the potential effect of having more or better services at the district level through new infrastructure investment done through canon revenues. Couples could modify their decision of having or not having kids thinking in the health, education or other services that their children will receive in the future.

Table D2 presents results using province fixed effects instead of district ones. These results only show statistically significant effects on the wealth index case. Indeed, when including the province

level dummies, the wealth index show a positive relation with the canon revenues thus showing a bigger scope effect of the revenues that we did not observe at the district level. The others dependent variables were not statistical significant at any level but had the same coefficient sign for the treatment variable, except for the anemia seeming to have non-effect because of the zero coefficient.

Table D 2: Difference-In-Difference Regression analyses (Province fixed effects)

Exogenous variable: Canon revenues greater than national average

Difference in Difference at province level through OLS estimation	(1)	(2)	(3)	(4)	(5)
	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
Canon revenues higher than national mean	0.471 (0.302)	0.211 (0.227)	0 (0.006)	0.167*** (0.022)	0.002 (0.005)
Education in single years	-0.022* (0.013)	0.036** (0.015)	-0.002*** (0.000)	0.087*** (0.001)	0.002*** (0.000)
Health insurance: don't have	-0.280*** (0.089)	0.003 (0.106)	0.000 (0.002)	-0.016** (0.006)	-0.070*** (0.003)
Male household head	0.245*** (0.095)	0.085 (0.125)	-0.006** (0.003)	0.068*** (0.007)	0.045*** (0.003)
Floor of household: earth	0.374*** (0.128)	-0.683*** (0.143)	0.014*** (0.003)	-1.048*** (0.012)	0.017*** (0.004)
Current age - respondent	-0.030*** (0.004)	-0.034*** (0.005)	0.001*** (0.000)	0.009*** (0.000)	0.000*** (0.000)
Currently pregnant	-12.544*** (0.187)	-12.674*** (0.188)	0.097*** (0.006)	-0.129*** (0.010)	0.024*** (0.006)
Number of children 5 and under	-0.901*** (0.054)	-0.946*** (0.060)	0.020*** (0.002)	-0.088*** (0.004)	0.549*** (0.003)
Unhealthy water facility	0.484* (0.265)	-1.141*** (0.210)	0.026*** (0.006)	-0.563*** (0.020)	0.057*** (0.007)
Constant	145.3*** (0.652)	134.1*** (1.443)	0.135*** (0.027)	1.961*** (0.075)	0.036** (0.016)
R-squared	0.422	0.043	0.021	0.686	0.5
District FE	No	No	No	No	No
Province FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

The last set of regressions (table D3) does not include any area fixed effect only year fixed effects. Results show strong statistically significant and positive effects of the exogenous districts receiving canon revenues greater than the national average variable on the hemoglobin levels, the wealth index, and the births in the last five years. What may seem surprising is that this effect is diluted once the altitude adjustment was considered, because we take into account that mining districts are usually located in the highlands (this particularity was captured in the previous set of regressions through the area dummies).

Table D 3: Difference-In-Difference Regression analyses (No geographic location fixed effects)

Exogenous variable: Canon revenues greater than national average

	(1)	(2)	(3)	(4)	(5)
Difference in Difference without area fixed effects through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
Canon revenues higher than national mean	2.550*** (0.440)	0.434** (0.172)	-0.001 (0.003)	0.275*** (0.017)	0.010*** (0.003)
Education in single years	-0.213*** (0.022)	0.003 (0.016)	-0.002*** (0.000)	0.109*** (0.001)	0.001 (0.000)
Health insurance: don't have	-1.669*** (0.156)	-0.317*** (0.110)	0.005** (0.002)	0.072*** (0.008)	-0.069*** (0.003)
Male household head	0.547*** (0.141)	0.185 (0.126)	-0.007*** (0.003)	0.034*** (0.008)	0.047*** (0.003)
Floor of household: earth	6.214*** (0.244)	-0.109 (0.142)	0.008** (0.003)	-1.286*** (0.014)	0.021*** (0.003)
Current age - respondent	-0.047*** (0.005)	-0.038*** (0.005)	0.001*** (0.000)	0.011*** (0.000)	0.000*** (0.000)
Currently pregnant	-14.080*** (0.238)	-12.857*** (0.189)	0.099*** (0.006)	-0.153*** (0.012)	0.026*** (0.006)
Number of children 5 and under	-1.912*** (0.081)	-1.095*** (0.063)	0.023*** (0.002)	-0.109*** (0.005)	0.550*** (0.003)
Unhealthy water facility	0.08 (0.546)	-1.527*** (0.226)	0.036*** (0.006)	-0.795*** (0.026)	0.069*** (0.007)
Constant	139.2*** (0.495)	130.6*** (0.346)	0.158*** (0.007)	2.128*** (0.026)	0.018** (0.007)
R-squared	0.071	0.028	0.008	0.583	0.497
District FE	No	No	No	No	No
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Tables D4, D5 and D6 present a similar organization to that observed in the previous tables, using the exogenous/treatment variable of districts receiving mining canon revenues on the specific year. That means, if the local government received any amount of canon bigger than zero in each year we considered it a treatment group district. Control group districts were those that did not receive any mining canon royalties on that year. Given that this classification uses a broader scope criterion to define treatment and control groups, the number of treatment group districts is significantly greater than the control group districts.

Table D 4: Difference-In-Difference Regression analyses (District fixed effects)

Exogenous variable: District receives canon revenues

Difference in Difference at district level through OLS estimation	(1)	(2)	(3)	(4)	(5)
	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District receives Mining Canon	0.492 (0.771)	0.049 (0.674)	0.006 (0.015)	0.037 (0.051)	-0.039** (0.018)
Education in single years	-0.014 (0.012)	0.024 (0.016)	-0.002*** (0.000)	0.072*** (0.001)	0.003*** (0.000)
Health insurance: don't have	-0.197** (0.085)	-0.074 (0.106)	0.001 (0.002)	-0.038*** (0.005)	-0.070*** (0.003)
Male household head	0.255*** (0.094)	0.085 (0.126)	-0.006** (0.003)	0.098*** (0.006)	0.043*** (0.003)
Floor of household: earth	0.092 (0.111)	-0.420*** (0.148)	0.007** (0.003)	-0.943*** (0.011)	0.014*** (0.004)
Current age - respondent	-0.029*** (0.004)	-0.035*** (0.005)	0.001*** (0.000)	0.008*** (0.000)	0.001*** (0.000)
Currently pregnant	-12.474*** (0.185)	-12.637*** (0.187)	0.098*** (0.006)	-0.110*** (0.010)	0.021*** (0.006)
Number of children 5 and under	-0.878*** (0.053)	-0.938*** (0.060)	0.020*** (0.002)	-0.076*** (0.003)	0.549*** (0.003)
Unhealthy water facility	0.634*** (0.237)	-0.453** (0.213)	0.006 (0.006)	-0.394*** (0.019)	0.034*** (0.007)
Constant	146.3*** (0.931)	137.5*** (2.024)	0.080*** (0.020)	2.371*** (0.069)	0.046 (0.029)
R-squared	0.45	0.06	0.038	0.728	0.506
District FE	Yes	Yes	Yes	Yes	Yes
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	134,069	134,092	138,860	138,860	138,860

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Tables D4 and D5 show that no significant associations were observed between the exogenous/treatment variable receives mining canon revenue and the majority of health outcomes. The only exception is observed on the number of births variable when controlling for district fixed effects (but not for province fixed effects). On the other hand, table D6 show that when not controlling for any geographic location fixed effects, the effects of the exogenous/treatment variable were statistically significant for all women's health outcomes, except for the number of births outcome. This set of regressions suggests that the effect of a municipality receiving mining royalties compared with the ones that did not received them, presented a positive response on the hemoglobin level even adjusted by altitude. In addition, the anemia levels in women decrease and household in the treated districts presented a higher wealth index.

Table D 5: Difference-In-Difference Regression analyses (District fixed effects)

Exogenous variable: District receives canon revenues					
	(1)	(2)	(3)	(4)	(5)
Difference in Difference at province level through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District receives Mining Canon	0.198 (0.724)	0.034 (0.588)	0.011 (0.014)	0.059 (0.048)	-0.018 (0.015)
Education in single years	-0.022 (0.013)	0.037** (0.016)	-0.002*** (0.000)	0.087*** (0.001)	0.002*** (0.000)
Health insurance: don't have	-0.270*** (0.090)	0.018 (0.108)	-0.001 (0.002)	-0.017*** (0.006)	-0.069*** (0.003)
Male household head	0.230** (0.095)	0.069 (0.126)	-0.006** (0.003)	0.069*** (0.007)	0.045*** (0.003)
Floor of household: earth	0.373*** (0.129)	-0.694*** (0.145)	0.015*** (0.003)	-1.061*** (0.012)	0.018*** (0.004)
Current age - respondent	-0.030*** (0.004)	-0.034*** (0.005)	0.001*** (0.000)	0.009*** (0.000)	0.000*** (0.000)
Currently pregnant	-12.534*** (0.188)	-12.671*** (0.189)	0.098*** (0.006)	-0.128*** (0.010)	0.024*** (0.006)
Number of children 5 and under	-0.913*** (0.054)	-0.961*** (0.061)	0.021*** (0.002)	-0.087*** (0.004)	0.550*** (0.003)
Unhealthy water facility	0.629** (0.264)	-1.037*** (0.210)	0.023*** (0.006)	-0.551*** (0.019)	0.056*** (0.007)
Constant	145.1*** (0.922)	134.1*** (1.488)	0.125*** (0.029)	1.905*** (0.083)	0.050** (0.021)
R-squared	0.422	0.042	0.021	0.687	0.501
District FE	No	No	No	No	No
Province FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	134,069	134,092	138,860	138,860	138,860

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Table D 6: Difference-In-Difference Regression analyses (No geographic location fixed effects)

Exogenous variable: District receives canon revenues

	(1)	(2)	(3)	(4)	(5)
Difference in Difference without area fixed effects through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District receives Mining Canon	11.070*** (0.274)	2.104*** (0.169)	-0.030*** (0.005)	0.293*** (0.023)	0.001 (0.005)
Education in single years	-0.191*** (0.022)	0.008 (0.016)	-0.002*** (0.000)	0.111*** (0.001)	0.001** (0.000)
Health insurance: don't have	-1.758*** (0.154)	-0.328*** (0.111)	0.005** (0.002)	0.080*** (0.008)	-0.067*** (0.003)
Male household head	0.453*** (0.138)	0.152 (0.128)	-0.007** (0.003)	0.029*** (0.008)	0.047*** (0.003)
Floor of household: earth	5.645*** (0.226)	-0.231 (0.141)	0.009*** (0.003)	-1.333*** (0.014)	0.021*** (0.003)
Current age - respondent	-0.047*** (0.005)	-0.038*** (0.006)	0.001*** (0.000)	0.011*** (0.000)	0.000*** (0.000)
Currently pregnant	-13.579*** (0.236)	-12.756*** (0.190)	0.099*** (0.006)	-0.144*** (0.012)	0.026*** (0.006)
Number of children 5 and under	-1.526*** (0.075)	-1.029*** (0.063)	0.022*** (0.002)	-0.100*** (0.004)	0.550*** (0.004)
Unhealthy water facility	1.110** (0.504)	-1.263*** (0.218)	0.030*** (0.006)	-0.770*** (0.023)	0.067*** (0.007)
Constant	130.1*** (0.484)	128.9*** (0.364)	0.184*** (0.008)	1.924*** (0.034)	0.016* (0.009)
R-squared	0.106	0.029	0.009	0.583	0.498
District FE	No	No	No	No	No
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	134,069	134,092	138,860	138,860	138,860

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Tables D7, D8, and D9 present the third specification using the exogenous /treatment variable district is mineral producer. Tables D10, D11, and D12 present the fourth specification, using the same exogenous/treatment variable, but restricting the sample to districts receiving mining canon (i.e. excluding those that did not received mining canon on that year). Overall, regressions show consistent result across both sets of specification, indicating no statistically significant effects on women's health outcomes.

Table D 7: Difference-In-Difference Regression analyses (District fixed effects)

Exogenous variable: District is mineral producer (Full sample)					
	(1)	(2)	(3)	(4)	(5)
Difference in Difference at district level through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District is mineral producer (vs non-producers)	-0.358 (0.694)	-0.382 (0.595)	-0.003 (0.017)	-0.001 (0.050)	-0.001 (0.014)
Education in single years	-0.014 (0.012)	0.022 (0.015)	-0.002*** (0.000)	0.072*** (0.001)	0.003*** (0.000)
Health insurance: don't have	-0.208** (0.084)	-0.087 (0.105)	0.001 (0.002)	-0.036*** (0.005)	-0.071*** (0.003)
Male household head	0.276*** (0.094)	0.108 (0.125)	-0.007** (0.003)	0.099*** (0.006)	0.043*** (0.003)
Floor of household: earth	0.081 (0.110)	-0.422*** (0.145)	0.007** (0.003)	-0.937*** (0.011)	0.014*** (0.004)
Current age - respondent	-0.028*** (0.004)	-0.034*** (0.005)	0.001*** (0.000)	0.008*** (0.000)	0.000*** (0.000)
Currently pregnant	-12.483*** (0.184)	-12.641*** (0.186)	0.097*** (0.006)	-0.111*** (0.010)	0.021*** (0.006)
Number of children 5 and under	-0.865*** (0.053)	-0.924*** (0.060)	0.020*** (0.002)	-0.078*** (0.003)	0.549*** (0.003)
Unhealthy water facility	0.540** (0.235)	-0.531** (0.211)	0.009 (0.006)	-0.399*** (0.019)	0.033*** (0.007)
Constant	146.8*** (0.526)	137.5*** (1.903)	0.087*** (0.014)	2.403*** (0.046)	0.009 (0.022)
R-squared	0.45	0.061	0.038	0.727	0.506
District FE	Yes	Yes	Yes	Yes	Yes
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Tables D7 and D10 control for district fixed effects. Results show no statistical significance across all women's health outcomes for the treatment variable, for both the full and restricted samples. However, the relationship of the treatment, production of mineral in the district, was inversely correlated with the hemoglobin levels this implying lower levels of hemoglobin for women although this effect was not different from zero. The anemia and the amount of births also showed an inverse relationship for the producer districts but the wealth index also seemed to decrease for them.

Tables D8 and D11 incorporate the province fixed effect, showing similar non-significant effects on all but one exogenous treatment variable. The exogenous treatment variable (i.e. mineral producer district dummy for both the full and restricted samples) has a positive and statistically significant effect on the hemoglobin level outcome. The result suggests that mineral producer districts would have an important effect increasing the hemoglobin levels of the women living there. However, when we consider the hemoglobin level adjusted by altitude this relationship disappears, as the coefficient turns non-significant and negative suggesting the opposite effect. All other health outcomes were not statistical significant.

Table D 8: Difference-In-Difference Regression analyses (Province fixed effects)

Exogenous variable: District is mineral producer (Full sample)

Difference in Difference at province level through OLS estimation	(1)	(2)	(3)	(4)	(5)
	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District is mineral producer (vs non-producers)	2.638*** (0.520)	-0.073 (0.472)	0.012 (0.008)	0.036 (0.033)	0.005 (0.007)
Education in single years	-0.021 (0.013)	0.036** (0.015)	-0.002*** (0.000)	0.087*** (0.001)	0.002*** (0.000)
Health insurance: don't have	-0.275*** (0.088)	0.005 (0.106)	0.000 (0.002)	-0.014** (0.006)	-0.070*** (0.003)
Male household head	0.246*** (0.095)	0.085 (0.125)	-0.006** (0.003)	0.068*** (0.007)	0.045*** (0.003)
Floor of household: earth	0.370*** (0.127)	-0.688*** (0.143)	0.014*** (0.003)	-1.052*** (0.012)	0.017*** (0.004)
Current age - respondent	-0.029*** (0.004)	-0.034*** (0.005)	0.001*** (0.000)	0.009*** (0.000)	0.000*** (0.000)
Currently pregnant	-12.553*** (0.187)	-12.674*** (0.188)	0.097*** (0.006)	-0.129*** (0.010)	0.024*** (0.006)
Number of children 5 and under	-0.907*** (0.054)	-0.946*** (0.060)	0.020*** (0.002)	-0.088*** (0.004)	0.549*** (0.003)
Unhealthy water facility	0.478* (0.263)	-1.139*** (0.210)	0.026*** (0.006)	-0.562*** (0.020)	0.057*** (0.007)
Constant	145.4*** (0.653)	134.1*** (1.443)	0.135*** (0.027)	1.957*** (0.074)	0.036** (0.016)
R-squared	0.423	0.043	0.021	0.685	0.5
District FE	No	No	No	No	No
Province FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

The final set of tables (tables D9 and D12) do not control for any geographic location fixed effects (only time/year fixed effects). Estimates show that, once these fixed effects are excluded from the model, all coefficients of the exogenous treatment variable are statistically significant across all health outcome regression models. An interesting result suggests that although the effect of living in a mining producing area would have a positive effect on hemoglobin levels of women, the effect changes to negative, when the hemoglobin level is adjusted by altitude. This finding is interesting as many mining producer district are located on the mountain slopes across the highland region. Anemia and number of births shows a positive effect for the producer districts versus the controls, while the wealth index evidences a negative association among the treatment group household, suggesting asset-poorer households in those areas.

Table D 9: Difference-In-Difference Regression analyses (No geographic location fixed effects)

Exogenous variable: District is mineral producer (Full sample)

	(1)	(2)	(3)	(4)	(5)
Difference in Difference without area fixed effects through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District is mineral producer (vs non-producers)	4.276*** (0.795)	-1.270*** (0.258)	0.033*** (0.006)	-0.198*** (0.023)	0.025*** (0.005)
Education in single years	-0.187*** (0.023)	0.004 (0.016)	-0.002*** (0.000)	0.111*** (0.001)	0.001** (0.000)
Health insurance: don't have	-1.615*** (0.159)	-0.266** (0.110)	0.004* (0.002)	0.092*** (0.008)	-0.069*** (0.003)
Male household head	0.520*** (0.141)	0.177 (0.127)	-0.007*** (0.003)	0.030*** (0.008)	0.047*** (0.003)
Floor of household: earth	6.169*** (0.240)	-0.195 (0.140)	0.009*** (0.003)	-1.317*** (0.014)	0.022*** (0.003)
Current age - respondent	-0.043*** (0.005)	-0.038*** (0.005)	0.001*** (0.000)	0.011*** (0.000)	0.000*** (0.000)
Currently pregnant	-14.171*** (0.237)	-12.855*** (0.188)	0.099*** (0.006)	-0.157*** (0.012)	0.026*** (0.006)
Number of children 5 and under	-1.974*** (0.080)	-1.094*** (0.063)	0.022*** (0.002)	-0.111*** (0.005)	0.549*** (0.003)
Unhealthy water facility	-0.116 (0.536)	-1.531*** (0.225)	0.036*** (0.006)	-0.807*** (0.027)	0.068*** (0.007)
Constant	139.2*** (0.491)	130.8*** (0.343)	0.155*** (0.007)	2.189*** (0.026)	0.017** (0.007)
R-squared	0.072	0.028	0.009	0.578	0.497
District FE	No	No	No	No	No
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Table D 10: Difference-In-Difference Regression analyses (District fixed effects)

Exogenous variable: District is mineral producer (Restricted sample – those receiving mining canon)

	(1)	(2)	(3)	(4)	(5)
Difference in Difference at district level through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District is mineral producer (vs Canon receivers)	-0.362 (0.648)	-0.391 (0.560)	-0.001 (0.016)	-0.002 (0.047)	-0.018 (0.015)
Education in single years	-0.014 (0.012)	0.022 (0.015)	-0.002*** (0.000)	0.072*** (0.001)	0.003*** (0.000)
Health insurance: don't have	-0.208** (0.084)	-0.087 (0.105)	0.001 (0.002)	-0.036*** (0.005)	-0.071*** (0.003)
Male household head	0.276*** (0.094)	0.108 (0.125)	-0.007** (0.003)	0.099*** (0.006)	0.043*** (0.003)
Floor of household: earth	0.081 (0.110)	-0.422*** (0.145)	0.007** (0.003)	-0.937*** (0.011)	0.014*** (0.004)
Current age - respondent	-0.028*** (0.004)	-0.034*** (0.005)	0.001*** (0.000)	0.008*** (0.000)	0.000*** (0.000)
Currently pregnant	-12.483*** (0.184)	-12.641*** (0.186)	0.097*** (0.006)	-0.111*** (0.010)	0.021*** (0.006)
Number of children 5 and under	-0.865*** (0.053)	-0.924*** (0.060)	0.020*** (0.002)	-0.078*** (0.003)	0.549*** (0.003)
Unhealthy water facility	0.540** (0.235)	-0.531** (0.211)	0.009 (0.006)	-0.399*** (0.019)	0.034*** (0.007)
Constant	146.8*** (0.526)	137.5*** (1.903)	0.087*** (0.014)	2.403*** (0.046)	0.009 (0.022)
R-squared	0.45	0.061	0.038	0.727	0.506
District FE	Yes	Yes	Yes	Yes	Yes
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Table D 11: Difference-In-Difference Regression analyses (Province fixed effects)

Exogenous variable: District is mineral producer (Restricted sample – those receiving mining canon)

	(1)	(2)	(3)	(4)	(5)
Difference in Difference at province level through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District is mineral producer (vs Canon receivers)	2.607*** (0.517)	-0.087 (0.469)	0.012 (0.008)	0.032 (0.033)	0.003 (0.007)
Education in single years	-0.021 (0.013)	0.036** (0.015)	-0.002*** (0.000)	0.087*** (0.001)	0.002*** (0.000)
Health insurance: don't have	-0.274*** (0.088)	0.004 (0.106)	0.000 (0.002)	-0.014** (0.006)	-0.070*** (0.003)
Male household head	0.246*** (0.095)	0.085 (0.125)	-0.006** (0.003)	0.068*** (0.007)	0.045*** (0.003)
Floor of household: earth	0.370*** (0.127)	-0.688*** (0.143)	0.014*** (0.003)	-1.052*** (0.012)	0.017*** (0.004)
Current age - respondent	-0.029*** (0.004)	-0.034*** (0.005)	0.001*** (0.000)	0.009*** (0.000)	0.000*** (0.000)
Currently pregnant	-12.554*** (0.187)	-12.674*** (0.188)	0.097*** (0.006)	-0.129*** (0.010)	0.024*** (0.006)
Number of children 5 and under	-0.907*** (0.054)	-0.946*** (0.060)	0.020*** (0.002)	-0.088*** (0.004)	0.549*** (0.003)
Unhealthy water facility	0.476* (0.263)	-1.139*** (0.210)	0.026*** (0.006)	-0.562*** (0.020)	0.057*** (0.007)
Constant	145.4*** (0.653)	134.1*** (1.443)	0.135*** (0.027)	1.957*** (0.074)	0.036** (0.016)
R-squared	0.423	0.043	0.021	0.685	0.5
District FE	No	No	No	No	No
Province FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Table D 12: Difference-In-Difference Regression analyses (No geographic location fixed effects)

Exogenous variable: District is mineral producer (Restricted sample – those receiving mining canon)					
	(1)	(2)	(3)	(4)	(5)
Difference in Difference without area fixed effects through OLS estimation	Hemoglobin level	Hemoglobin level adjusted altitude	Anemia	Wealth index	Births in last five years
District is mineral producer (vs Canon receivers)	4.366*** (0.798)	-1.267*** (0.259)	0.033*** (0.006)	-0.194*** (0.023)	0.024*** (0.005)
Education in single years	-0.187*** (0.023)	0.004 (0.016)	-0.002*** (0.000)	0.111*** (0.001)	0.001* (0.000)
Health insurance: don't have	-1.612*** (0.159)	-0.268** (0.110)	0.004* (0.002)	0.092*** (0.008)	-0.069*** (0.003)
Male household head	0.519*** (0.141)	0.177 (0.127)	-0.007*** (0.003)	0.030*** (0.008)	0.047*** (0.003)
Floor of household: earth	6.170*** (0.240)	-0.194 (0.140)	0.009*** (0.003)	-1.317*** (0.014)	0.021*** (0.003)
Current age - respondent	-0.043*** (0.005)	-0.038*** (0.005)	0.001*** (0.000)	0.011*** (0.000)	0.000*** (0.000)
Currently pregnant	-14.172*** (0.237)	-12.855*** (0.188)	0.099*** (0.006)	-0.157*** (0.012)	0.026*** (0.006)
Number of children 5 and under	-1.974*** (0.080)	-1.094*** (0.063)	0.022*** (0.002)	-0.111*** (0.005)	0.549*** (0.003)
Unhealthy water facility	-0.116 (0.536)	-1.531*** (0.225)	0.036*** (0.006)	-0.807*** (0.027)	0.068*** (0.007)
Constant	139.2*** (0.491)	130.8*** (0.343)	0.155*** (0.007)	2.188*** (0.026)	0.017** (0.007)
R-squared	0.072	0.028	0.009	0.578	0.497
District FE	No	No	No	No	No
Province FE	No	No	No	No	No
Year FE	Yes	Yes	Yes	Yes	Yes
Clustered errors	Yes	Yes	Yes	Yes	Yes
Observations	136,361	136,384	141,207	141,207	141,207

Note: Robust standard errors are reported in parenthesis. Coefficients that are significantly different from zero are denoted by the following system: * = 10%; ** = 5%; *** = 1%.

Annex E: Qualitative Component: Qualitative Instruments and List of used codes

Qualitative instruments: Focus Group and In-Depth Interview Survey and Guide

1. Survey previous to Focus Groups

1. Name

2. Age (years of age so far) _____

3. Address (at least populated center or district of residence)

4. The place you live in is: _____

1. Own 2. Family 3. Rented 4. Refuge/Shelter

5. Other (specify) _____

5. Who you live with?: _____

1. Alone

4. Friends

2. Family (husband, wife/children/grandchildren) 5. Other (specify) _____

3. Other family (siblings / cousins / etc.)

6. Mother tongue (learnt at childhood)

7. Do you currently work? Where?/If not currently working: Where did you work?(occupation)

8. Where do you usually go to receive medical treatment when you get ill?

9. Do you have health insurance? Which one?

2. Focus Group Guide

RECEPTION AND WELCOME PARTICIPANTS (5 min)

Good morning, thank you for your availability to participate in this meeting. This is _____, I am _____. We work as part of a project in the University of Georgia in United States. We are here with you because we want to know your opinions and testimonies about some issues of our daily life and specifically about health in _____. The idea is to have a nice conversation where you feel free to express with honesty. Because what you have to say is very important and memory is fragile, this conversation will be recorded (install the recorder in case is authorize).

Finally remind you everything said here is confidential and anonymous and will not be used to other purpose than our study. The discussion will take around an hour, but your time will be rewarded at the end with a small gift.

WARMING PHASE (10 min)

1. Presentation of participants: Name, last name, age.
2. How long have you lived in this district/province?
3. What do you like the most about living here?

HEALTH ANALYSIS ORIENTED TO WOMEN (60 min)

1. Viewing the current situation in _____, do you consider the population is healthy or attended by health specialists? Why? Is there any common disease or ailment among the people of _____?
2. In general, when your family or friends get sick, what do you usually do? (Seek specialized treatment locally or at the capital, get treated at home, natural/traditional medicine, self-medicate, etc.). What do you think motivates people in _____ to behave like this in case of a disease?
3. Now I would like to talk about the health service. Do you think that _____ has public health attention? And private?

Which health establishment people in _____ go more often? Is there any necessity remaining among the population of _____?

4. I will show you now some pictures of different kind of health establishments and I would like you to tell me if in _____ or any other near district there is any of this kind.
- Show pictures: specialized clinic, private clinic, polyclinic, big hospital, health post
5. Regarding these health establishment, do you think now in _____ are more places to go when you are sick? The number of care centers has remain the same/has drop?

Would you say the current administration has improved or neglected the health field? Why? Would you expect a bigger investment in health from the Municipality of _____?

6. When you have gone to a health center to be treated, how was the treat you received from the staff (doctor, nurses, administrative)? Did this affect your decision of going to get treatment?

7. (Only women) Finally, do you think women in _____ receive the necessary health attention? Either in terms of specific gender diseases or pre and postpartum care. Why?
8. (Only men) Gentlemen, what do you think about the women health issue in _____? Do they have the same/more/less access to health care? Do you agree with what the women are saying?

Give time for comments or questions from the informants

“Thank you very much! It has been nice to meet you and is very useful for us knowing your experiences and opinions.

→ Gift delivery.

3. In-depth Interviews with Women

Note: ONLY in case they are not part of the FG:

Good morning, my name is _____, I work for a project of the University of Georgia in the United States. I am doing an interview to know your opinions and testimonies about some topics of daily life of women in the town.

Note: if participated in FG start here:

Mrs. _____ now we would like to ask you some questions about what we discussed together a moment ago to know what you think. Everything you say will be confidential and we will respect your anonymity. Once again, because the memory is fragile I would like to record what you say to me (install recorder in case is authorize)

I. Health attention

1. Do you think the health attention in _____ has improved/worsened/the same? Why?
2. Which health necessities remain? And for women?
3. Do you think women are well attended? Are there specialists for their necessities?
4. For men? Would you say they are better/worse attended?
5. In the case of the mothers, do you think they can get treatment during the pregnancy and take care of their children (checkups)?
6. What do you think needs improvement regarding women's health in _____?

II. Municipalities spending

7. Do you know where is the municipality spending their resources lately?
8. Do you know about the Canon income for local governments?
9. Do you know if the Municipality of _____ is investing in health lately?
 - Maybe you have seen improvement
 - There is a negligence of health in _____
10. What do you think motivates the spending decision of the Municipality? (critical needs, people's voice, own convenience, other)

4. In-Depth Interviews with Municipality Workers

Good morning, my name is _____, I work for project of the University of Georgia in the United States. I am doing an interview to know your opinions and testimonies about some topics about the spending decisions of the local governments.

I. Data

1. Your name is _____
2. And you have the position of _____ at the Municipality of _____
3. The topics you usually see at your daily job are _____

II. Interview

1. How do you see the public spending situation and its impact in women related issues in _____?
2. Do you know about Canon? Do you know if in this district the local government receives any kind of Canon?
- Yes: (type of canon) _____
3. Do you think the canon has had a positive effect in women of _____? How?
-Health: _____
-Employment: _____
-Empowerment: _____
-Other: _____
4. Do you agree on how the money from Canon has been used in _____?
- Do you find it fair in terms of gender or do you see any advantage for men or women?
5. Which kind of investment for the district would you prioritize if you could decide on the Municipality's spending? And from Canon revenues?

Table E 1: Table of used codes in Atlas Ti

Code Information	Comment	Author
*CANTA	*Activity held in Canta	Super
*MANCOS	* Activity held in Mancos	Super
*MARCARÁ	* Activity held in Marcará	Super
*Participants	*Name and number of participants in the FG	Super
Anecdote	*Personal anecdote (citing)	Super
Change: health centers	*Changes perceived in health centers	Super
Change: health personal	*Changes perceived in health personal	Super
Change: health services	*Changes perceived in health services	Super
Common diseases	*Common diseases in the locality	Super
Health center: Hospital	[no entry]	Super
Health center: Polyclinic	[no entry]	Super
Health center: Post	[no entry]	Super
Health center: Private clinic	[no entry]	Super
Health center: Specialized Institute	[no entry]	Super
Health service: personal	*Information related to the health personal	Super
Health services: Appropriate / Not	*Health services was or was not appropriate	Super
Health services: Needs	*Unmet health needs	Super
Health services: Private Supply	*Available health private supply	Super
Health services: procedures/equip	*There are not available products or equipment for doing them.	Super
Health services: Supply	*Available health supply	Super
Insurance: ESSALUD	*Information related to EsSalud insurance	Super
Insurance: SIS	*Information related to EsSalud insurance	Super
Interview: Health Provider	*Fragment extracted from health professional	Super
Medicine	*Medicine is available or not at the health center	Super
Men: gender differences	*Gender difference in the attention, procedures, specialist and behavior towards health	Super
Municipality authority: Opinion	*Opinion about which areas should require more expenditure	Super
Municipality authority: Projects	**Projects of the local government known by the authority	Super

Continues

Table E1: Table of used codes in Atlas Ti (continues)

Code Information	Comment	Author
Municipality: Claims	*Claims done to municipality with positive or none result	Super
Municipality: Expected Priorities	*What people would like to be prior for the municipality	Super
Municipality: Expenses Knowledge	*Information about the expenses of the municipality known by the participants	Super
Municipality: Health interest	*Municipality attitude towards health lately	Super
Municipality: Motives Expending	*What the participants felt was the principal motive of the local government for expending	Super
Quality treat	*Quality treatment in general	Super
Quality treat: far	*Quality of treatment when derived to other places	Super
Quality treat: local	*Quality of treatment in the locality	Super
Treat far: transport	*Transport for going to far places to be treated	Super
Treat: Natural medicine	*Does not go to health center, instead treatment at home or with natural recipes	Super
Treat: Pharmacy	* Treatment done consulting in the pharmacy instead of health center	Super
Treat: Place derived	*Where they are derived to be treated	Super
Treat: Reason	* Reasons to be treated	Super
Treat: Self medication	*Treat themselves with auto-receipt	Super
Treat: Waiting time	*Time when attention is available	Super
Treatment far	*Have to move to get treated - Lack of medicines, doctor or procedures	Super
Treatment: Local	*Receives local treatment for an illness (health post, hospital, etc.)	Super
Women: Labor and Delivery	*Procedures for labor and delivery	Super
Women: New-born checkups	*Checkups for children (CRE)	Super
Women: Fertility control	*Contraception, test, etc.	Super
Women: needs	*Women needs claimed by participants	Super
Citing	*Quotations for citing in the report	Super

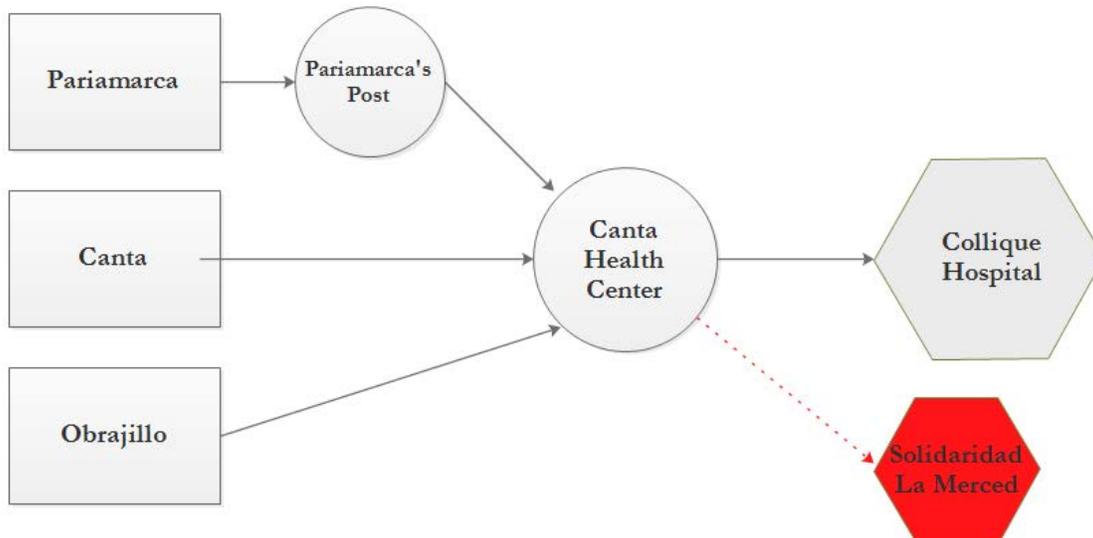
Annex F: Path to Health Care Services

Control Group: Pariamarca, Obrajillo and the district of Canta, Canta Province, Lima

Based on the complexity of the illness or disease, people living in these villages would receive treatment at the local health center (commonly located by the community's main plaza) for simple cases. For more serious cases that the local healthcare center could not treat, patients will be sent to a health center located in the capital of the province (i.e. Canta), approximately 30 minutes from the villages of Obrajillo and Pariamarca. For even more complex cases, patients will be transferred to the Sergio Bernales Hospital, located in the Comas district of Lima (known as "Collique"), approximately three hours away from Canta.

Figure F1 describes the path that patients commonly follow when seeking treatment, based on the severity of their illness or disease going from left to right, from basic treatments to requiring more specialized treatments and doctors. Obrajillo does not have a local healthcare center and Canta has a larger healthcare center, because of its status of capital of the province. The red color indicates an alternative route that was commented in the focus group only used in case of extreme emergency due to its costs. The *Solidaridad* hospital, located in Comas, is part of the Lima municipality and it is subsidized. However, the SIS or EsSalud insurances do not cover the cost of the attention in it.

Figure F 1: Map of Health Route for Patient Treatment - Canta



Source: Authors. Data compiled by authors.

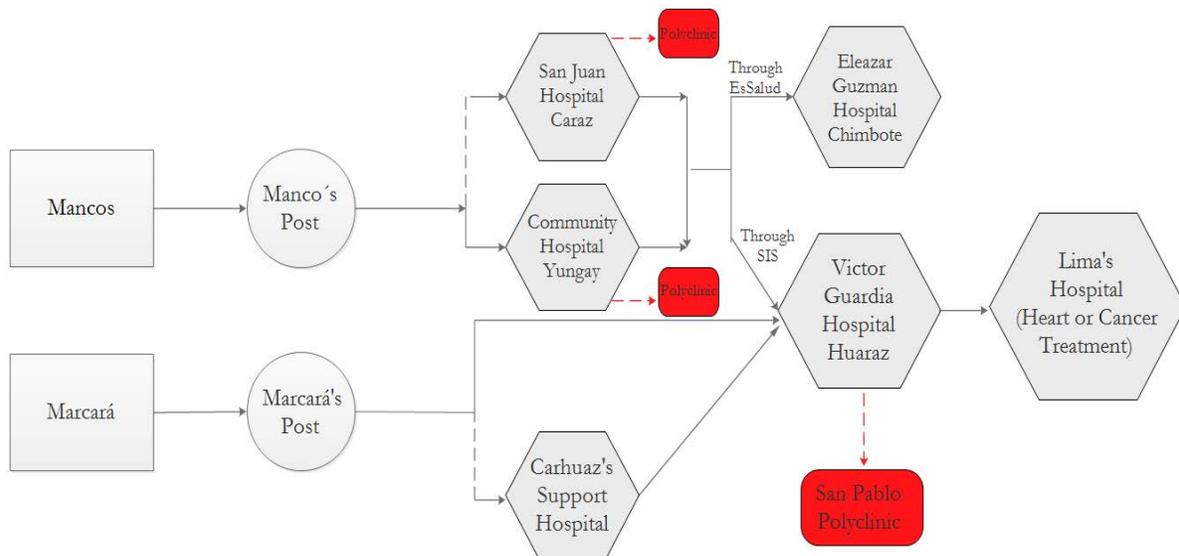
Note: The red color denotes establishment not covered by the insurance (private), hexagons represent hospitals and circles the posts and health centers.

Treatment Group: Yungay and Carhuaz Districts, Ancash Province.

Figure F2 describes the path that patients commonly follow to get treatment. FG participants indicated that the first place where the population commonly sought treatment was the local healthcare centers in Mancos and Marcará. Patients with more complex cases were sent to the district hospital. The third level of medical care is commonly provided at the Yungay hospital (for Manco's residents) or the smaller Caraz hospital and Marcará patients are commonly sent to the Carhuaz hospital or the larger Huaraz hospital.

The last resource for patients who have not been able to receive treatment in healthcare centers or smaller hospitals is the Victor Guardia hospital, the largest hospital in the region. Those covered by the ISI insurance commonly choose this hospital, whereas those covered by the EsSalud insurance are commonly sent to the Eleazar Guzman hospital, located in the city of Chimbote. Figure 10 also show alternative paths (marked in red) for patients who choose private care, mainly use in emergency cases, due to the high costs that they represent. Small private polyclinics are available in Yungay and Caraz, as well as in Huaraz (the San Pablo polyclinic).

Figure F 2: Health route for treatment - Mancos & Marcará



Note: The red color denotes establishment not covered by the insurance (private), hexagons represent hospitals, rounded figures denotes private polyclinics and circles the local healthcare centers presents not common places to be derived. The dotted lines Source: Own. Compiled by authors.

Annex G: In-Depth Interviews with Local Residents

In Depth Interviews Local Residents: Ancash

MANCOS

Audio length: 00:17:01

Interviewed: Delci (P)

I: I'd like to know your opinion. Do you think the health attention has improved here in Mancos and in Yungay in general?

P: Well the health attention regarding SIS, as I said...sometimes there aren't the medicines. So the patient comes and you have to tell them there isn't medicine and they get mad. But because the person is sick they have to buy, but some people don't have enough money and they have to go the city to sell their harvest and get some money ...

I: To buy

P: So they can buy it the next day and receive the treatment they need

I: And before you had SIS, how was the health situation? Was it more difficult?

P: When SIS didn't exist everything was for sale. And people knew you had to sold them everything

I: So they had to buy everything

P: Yes

I: But even with insurance there aren't enough medicines

P: Yes

I: You end up buying it either way

P: Yes, you end up buying everything. Or maybe the medicine is not strong enough and if you want to give them something stronger we don't have it and they have to buy it.

I: And you have drugstores nearby? Or do you have to go far?

P: We have. There is a drugstore that works at the parish where the medicine is cheaper than the prices at the pharmacy

I: And is from the church

P: Yes. The church has invested, I don't know. There is a parish pharmacy where the medicine is cheaper and the same quality. The pharmacies usually sell brand name medicine and they are expensive. We have some medicine we sell at 1.50 soles and at the pharmacy they sell it at 16 soles

I: Wow. You work there?

P: I work at a health post in Yanamito. The municipality pays me, there is a health post built by the municipality in a previous administration

I: Yanamito belongs to Mancos, but is further

P: Yes, more or less the same height. I work there so the situation is like that

I: And you were hired there by the Health Ministry or the municipality?

P: The municipality. They pay me. Because the health ministry doesn't have budget for that. They don't have and the people demand the mayor to have more staff. They don't have someone to go to Mancos

I: And the work you do there is nurse, technician?

P: I'm a technical nurse and I give attention. Attention, checkups for children. Checkups for pregnant women. There is only one pregnant lady up there, so I have to be aware of her checkups so she comes down here and the obstetrician can see her

I: Because at the health post

P: There isn't. It only works at an establishment the municipality borrowed us so it's not suitable to give attention

I: There isn't more treatments. There are first aids and a quick attention and then they derive them here

P: Yes. If I see is more severe I have to find the way to bring her to the health post

I: Ok. How far is Yanamito?

P: 40 minutes from here

I: 40 minutes

P: But there aren't constant transportation. There aren't cars to go up and down. Sometimes we have to walk and is an hour walk to find cars that can bring you down here

I: Ok, for a pregnant woman it's complicated

P: Is complicated. That's why when is serious I talk to my boss here and they send an ambulance

I: The ambulance can pick her up

P: When it is very serious

I: Ok. What needs do you think remain here? What treatments do you still need, what is missing here? Specialists, analysis, equipment

P: Everything that...normally the ones who attend more are women and children. The children need a pediatrician and dermatologist. We try to medicate them but a few months later they relapse. The women need a gynecologist

I: So you need specialists

P: Pediatricians and gynecologists

I: And analysis for women, papanicolaou, and any other, do you have that here?

P: Here there is a laboratory that takes analysis of blood, urine, and feces

I: You have that

P: Yes

I: And men, do you think they are better treated than women? It's the same, worse?

P: They don't go much often, but when they do is the same treatment

I: Same treatment. And the mothers, can they get treatment during their pregnancy and treat their children afterwards? Or the necessity of a pediatrician is strong?

P: The mothers can give birth here. Or the believe that they have to rest, as the old ladies say, they can't do anything so they don't have a "sobre parto" as they call it

I: Those are postpartum problems

P: Yes. But we had cases of infection. So the person who works at that farmhouse is responsible and has to find the way of bring them here. And sometimes they don't want to and we have to insist. And if we don't have the way to bring them we have to find a way

I: It could be that they don't want to go?

P: Yes. They don't want to.

I: And they don't want to because of believes? Or because they don't have a way to go and come back

P: Sometimes they don't have money for transportation and they have to walk 40 minutes

I: Right. And knowing this problems. What do you think should be improved for women? Specialists is one thing

P: Yes and the mobility...because if they die on the road what would you do? It's very difficult for the staff there

I: And are there more places like that nearby?

P: Yes, there are more health posts higher

I: From the municipality?

P: No, those are from Minsa

I: Two from Minsa and one from the municipality in the middle. And this is because the Minsa only allows it if there is certain amount of people

P: Yes. And at the top they only speak Quechua. So they come here to talk to the authorities. As they speak Quechua, they don't understand. And we see the necessity of a health post with beds and everything needs for health campaigns. It is something we can't heed sometimes

I: The staff don't speak Quechua?

P: The ones from here do. But when Serum staff comes is from different parts of Peru and they don't know. We have to be pendant of the doctors. We support each other with that

I: The doctors that come here usually don't speak Quechua

P: They don't know

I: And now I want to ask you some things about the municipality. Do you know where is the municipality destining the inversion? Do they inform you?

P: We don't have that information

I: You don't have participative budget

P: Last year they had and this year we expect to have one. I've been telling people from heights to come

I: They don't usually come

P: No. Or they ask for construction

I: Structure

P: Sure, but I told them to ask for health. December ends and they don't hire more staff until the new budget

I: February, March

P: Yes and only in March we work. So I think they should do the participative budget until next year so they don't close it in January because those two months we lose the children updates

I: They have to come here

P: Sometimes they don't come and after three month you see the children and they have anemia, so it's against the children's health. And the moms don't take them because they have to work. So if you are there you can have home visits

I: You do that

P: Yes

I: You have the children census

P: Yes. I see the kid has a checkup and if they don't come I go the next day to see what happened. Every six months they have to do a blood test. They have to go to Mancos to see the child and how is going his feeding.

I: The municipality doesn't inform you. You have the participative budget but after that they don't tell you how they are spending the money

P: No, they don't

I: There is no information. Have you heard about the canon income?

P: Yes

I: Do you know if the municipality of Mancos receives canon?

P: Yes, they do

I: And have you seen any obvious improvement? A new school, health center, anything? Or you haven't seen any improvement

P: No, nothing

I: There is no improvement

P: Nothing. The only thing the mayors do is acquire a new car fleet

I: And everything here remains the same

P: Yes

I: Would you say there is a negligence in health from previous administrations?

P: Yes. The municipalities should compromise with the health issue. If not everywhere at least at the network. Mancos works as a micro network

I: How does this network works? Is it connected to Yungay?

P: No. Ancash has two networks. Huaylas north network and Huaylas south network. Huaylas south network covers up to Carhuaz and from there to Huaraz. And the Huaylas north network covers from Carhuaz to the area of Caraz

I: Chimbote?

P: Chimbote is another network. Every district works as a micro network, in this case Mancos. Mancos sends all their information to Huaylas north network

I: So the health posts are connected to the hospital

P: All the health centers belong to the micro network of Mancos, we all come down on Saturdays to bring the information

I: To Mancos

P: Yes. Mancos delivers it to Caraz. To the Huaylas north network. The hospital has nothing to do

I: And this information includes medical history, number of children and pregnant women

P: Everything. All your patients, everything is coded. Their medical history name, DNI, everything

I: To track them

P: Yes, everything. They have typists to have everything in the system

I: And this goes to Minsa

P: To Minsa. It's interfaced

I: And what do you think that motivates the investment of the municipality? Is it because people complain or because they want to look good and the people won't complain? Or is it for the votes?

P: I think is for their own benefit

I: If the people complain the mayor listens to the complaints

P: Yes because if he doesn't do anything they come here and cause trouble

I: Has it happen?

P: Yes, two, three years ago

I: What did they ask?

P: A community from Huachicaus, they came because the mayor offered to improve the roads and he didn't do it so they came and caused trouble

I: And he did it

P: Yes, if you don't demand it no one does anything

I: Thank you

MANCOS

Audio length: 00:07:34

Interviewed: Ilda (P)

I: I want to ask you some questions about what we've been talking

P: Ok

I: Mrs. Ilda, do you think the health attention here in Mancos has improved? Is it worse, the same?

P: The same

I: Same than before?

P: Yes

I: Nothing has change?

P: Hasn't changed or improved, the same

I: And which health necessities remain? What is missing that you need?

P: We don't have...

I: Bye, thank you

P: Sonograms or x-rays, nothing

I: There aren't sonograms or x-ray

P: No

I: And this situation remains the same

P: Yes

I: And the people needs this but you don't have it yet

P: Yes

I: And regarding women, what do they need? Than you sir, thank you very much

Julián: Very grateful

I: What things do women need and you still don't have?

P: For women...

I: Gynecologist you were saying

P: Yes, that. Papanicolaou and those things. Yes

I: And do you feel women are well attended here? Are there specialists when they need them?

P: No there aren't. Sometimes they come. With papanicolaou is the same, they are not updated. For those things is better to go to Huaraz or Caraz, is a recommendation

I: But you need a reference from here right? Unless is private

P: With the SIS. You go with SIS

I: And regarding men, you were saying they don't go to the doctor often but are they well treated?

Do they have a better attention?

P: The same

I: Same

P: Same

I: Same as women

P: The same

I: And the mothers here, can they get treated while they are pregnant? Treat their children? Or they have to go somewhere else

P: No, they get treated. They come here and get treatment. If not they wouldn't register their children and it is mandatory now. You have to bring them. We used to give birth at home before

I: You had midwives

P: Midwives. But now you have to go to the health post

I: Ok. So you can give birth at the health post

P: Yes

I: There you give birth

P: Yes

I: So, what do you think needs improvement regarding women's health here in Mancos? What would you change?

P: Well. I have to go every month to the health post. I have diabetes.

I: And you receive treatment

P: They take my glucose

I: To see the levels

P: The level of glucose and they give me 30 pills

I: For the month

P: Yes, 30 pills

I: And they always have the pills?

P: And I also have chronic gastritis and they give me 15 pills for a month

I: For one month

P: Yes. And now for my bones the medicine is...basic. It doesn't ease the pain

I: It doesn't work

P: Because I have osteoarthritis also. And the medicine doesn't work so I have to buy

I: somewhere else

P: Yes. I have to go to Huaraz, gathering my money, selling my animals, is the only medicine that works for me

I: The only one. They don't have it at the health post

P: No, they don't have anything

I: No...

P: What can I say? The pill I take costs 3.50 soles and the health post has pills that cost 1.50 only. 500mg only

I: Is not strong enough

P: They have less antibiotics. I have stronger pain every day and I need something that helps

I: And they should improve that. Having more medicine at the health post

P: Yes. Because of the pain you have to buy the medicine.

I: Now regarding the municipality, do you know where the money of the municipality is going?

Where are they spending the money?

P: Well, what can I say? I don't know about that

I: Do you know if there is a participative budget? Where you make decisions

P: Yes maybe. They are making drains

I: That is changing

P: But it seems the money ran out because they have stopped

I: That is here in Mancos

P: In Mancos

I: They were building drains and they didn't finished it

P: Yes. It's incomplete now

I: But the municipality tells you where are they spending the money?

P: Well I don't know. Maybe they talk about it with their coordinators. I don't know

I: have you heard about the canon income?

P: Canon?

I: Canon. For the municipalities. Or you haven't heard about it

P: No, no. They haven't offer us

I: And do you know if the municipality is investing in health lately? Have you seen any change in health from the municipality?

P: They said when a person complained, for example they take my glucose levels for free but last month they charge me 3 soles

I: At the health post?

P: Yes. That's why a lady told me to go and complain. But I haven't go

I: But they charged you and they shouldn't have

P: They said that. The SIS shouldn't charge us

I: So you would say there isn't a good supervision and they can charge you for things they shouldn't?

P: Yes

I: So you haven't seen any investment from the municipality regarding health?

P: No, no

I: There is no difference

P: No difference

I: So you would say there is negligence in health? From the mayor, municipality...

P: They probably don't, that's why we don't have things done

I: The last thing I want to ask you, how do you think the municipality decides where to spend? Is it because the people needs, because it's convenient for them or maybe because is a way of keeping the people quite

P: I think they are making them work. I don't know what to say about that

MANCOS

Audio length: 00:13:05

Interviewed: Inés (P)

I: Mrs. Ines, I wanted to ask you your opinion about certain topics about health and the municipality. Do you feel the health attention in Mancos has improved? Is it worse or is the same?

P: Well I think...

I: (To others) Bye, thank you

P: I think it hasn't improved

I: It hasn't improved but has it been any improvement?

P: Well...something. Because before there were complaints so the technicians have dedicated a little bit more to see what people needs. But there is still a lot of things that need to be done.

I: So it has improved a little bit regarding attention, better technicians

P: Yes, a little bit faster but sometimes they don't keep their schedules

I: They don't keep their schedules

P: No

I: And it was like this before?

P: Yes

I: Or is worse? Or the situation was like this

P: No, it was like this

I: And what health needs remain among people here? What things are you still needing and you can't get treatment here?

P: Well. The rheumatism

I: Among the elder, because of the cold maybe

P: Because of the cold and age, they suffer from osteoporosis, rheumatism. The children have the flu or sometimes fever from infections they have for lack of hygiene

I: And they can treat all of these here? Or sometimes they have to transfer you...

P: They can treat it here. The people from heights get more treatments here. I have my insurance but I don't go often. I prefer to treat myself instead of going to the doctor

I: And what do you do? Do you go to the pharmacy?

P: Sometimes if I know what to take. But I go to a private service because they sometimes take long to derive us to Huaraz and I rather go to a health center...

I: Private

P: Private

I: Which is faster

P: Faster and the medicine also...they aren't basic

I: Stronger maybe

P: Stronger. Better. More expensive but it calms your ailment

I: Right. And do you think women are well attended here? Are there specialists for their needs? You said a gynecologists is missing

P: We need a gynecologist because we have an obstetrician only and she doesn't have a fixed schedule. They came to Huaraz two days only but I've heard there is an obstetrician now

I: That's new? How long has she been here?

P: Two years already

I: You didn't have an obstetrician before

P: No, she came by shifts. And pediatricians also came for the campaigns

I: Sometimes pediatricians come too

P: Yes, sometimes they come for campaigns but when they don't coordinate we don't have. They have more in Yungay, people here find out if there is something and we go to Yungay

I: And who informs you about this? The health center?

P: No, the people themselves

I: The people

P: Sometimes we ask our neighbors where they come from and they tell us there are campaigns so we go

I: The health center don't inform you about it then

P: No, they don't. When I had to undergo surgery due to hernia, I went to Huaraz and I saw the main square was decorated with blue. And casually I find out it was a campaign for any disease. A doctor treated me...

I: Your hernia

P: Yes. They told me I had a hernia and they could operate me. And the next day I had surgery

I: There

P: Yes

I: At the hospital in Yungay

P: At the hospital in Huaraz

I: Huaraz. At the Victor...

P: No, no. The one from Essalud, they go there because of Essalud

I: And you didn't have to wait long, they were saying Essalud was slow

P: No, no. It was fast. But Essalud health campaigns usually go to Huaraz

I: Huaraz. Yungay maybe...

P: Yungay, but not that much

I: And here in Mancos

P: Here we don't have those

I: They never come to Mancos

P: No, no

I: And men, would you say they are well attended? You don't have specialists, urologists

P: Here almost, well the kids. But men are old here. Elderly

I: And they do go to the doctor

P: Yes, any ailment they have they go to the doctor

I: And the mothers here. Do they receive the care needed while they are pregnant and after the pregnancy? Or they have to go somewhere else

P: No. They receive treatment here, when the obstetrician is here they do the children checkups, the weight, height, they take their...the heart

I: The pulse

P: Yes. But to give birth they go somewhere else

I: And if it's an emergency they can give birth here

P: Yes, if it's an emergency

I: And after birth, the growth control, anemia, micronutrients, can they do it here?

P: Yes, the doctor does that. We don't have a pediatrician

I: At the health center

P: Yes, here

I: And what do you think needs improvement regarding women's health here in Mancos? What should change?

P: Well, we need more time from the doctors, a fixed doctor with a nurse or technician. Also equipment

I: More time, equipment

P: The equipment we have is old

I: Staff

P: Yes, staff. We need that

I: And specialists

P: Specialists too. At least a pediatrician twice a week. We would all go I think. I would go even paying 10 soles because I'd be treated. But going to the health post, queuing, wake up at 6, no. Instead I go there and I'm treated. Paying of course

I: You pay for what? The attention?

P: Yes, when we don't have SIS

I: When you don't have SIS

P: I'm from...

I: Essalud

P: The State, Essalud. I don't have SIS

I: And Essalud doesn't have health establishments here in Mancos?

P: No, no

I: Only SIS

P: Yes

I: Now regarding the municipality, do you know where are they allocating the resources? How are they spending the money?

P: Well I don't really know because I work in Yungay and I don't know about the mayor management. A friend was talking about that, she had surgery. She is more informed than me because she sells lunch to...

I: The municipality workers

P: Yes. She is more informed but I think Mancos hasn't changed with any administration that enters

I: But the municipality shows the people where are they spending?

P: No, no

I: You don't have that information

P: No, there isn't an assembly

I: Is there a participative budget?

P: Yes. We have water problems and every mayor that enter has to make new roads. I don't know if the money goes there or they keep it. But we have the worst water

I: You don't have drains

P: There is water but it isn't clean. It's dirty. I have to put it in big cans so the dirt settles

I: And then filter it

P: Yes. Or put some lye drops so I can cook

I: So you can use it

P: Yes. We've always had this problem

I: And it hasn't change

P: No. Other thing is they put electric power to the main street

I: Lighting

P: Lighting. It was a waste. They put some benches which we didn't like and the power is very low. Very low light

I: Right

P: We claim that at least at night the main square...

I: Turn on the lights

P: Yes so it seems pretty. We don't have that so tourists go somewhere else. They don't come here anymore.

I: Ad do you know about the canon income? Have you heard of it?

P: Well I heard they give a lot of money. Here in Mancos we receive more than Ranrahirca they said. But then they took it because they didn't do anything with it.

I: And do you know if Mancos has canon?

P: I don't know

I: And do you know what kind of canon it is? Fishing, forest...

P: Mining I think. Because we have mines here. Another case, they have broken the roads to fix the pipes and they have left it there, a mess. We don't know who is going to fix that. The streets are broken now

I: And have you seen any improvement in Mancos? You say the municipality has invested in drains but have you seen anything else? Only that? Or have you seen anything else...

P: No because the water is the same. I have to gather it and all the dirt stays at the bottom

I: And in education, work, young people, have you seen any change?

P: I think education, because the municipality has given talks to the teachers

I: And regarding health, have you seen any change the municipality has made?

P: No, I haven't seen anything

I: So you would say there is a negligence from the municipality in health issues?

P: Yes, negligence

I: From the municipality

P: From...the municipality is supposed to care about the health center isn't it?

I: Yes

P: Yes. It's not a...nice place. The walls, the rain has ruined them

I: It doesn't have maintenance

P: No. To have a good maintenance you need money

I: And finally I wanted to ask you. How do you think the municipality decides to spend their money? Do you think is because they care about people necessities, they spend in what is convenient to them, in the things that gave them more political credibility?

P: Well as I told you I don't see the mayor that much. I don't work here and I don't know how they spend the money. I don't vote for mayor at the elections

I: You vote in Yungay

P: No, no. Here but I don't like them and I know they won't make anything because they are from height not here. Everything goes there. They are supposed to make good things for the height but I don't know

I: Do you know if there are new things there?

P: No, no

I: Have you heard anything?

P: No, I haven't heard of any change there

I: Ok, thank you, that's all I wanted to ask

P: Ok, you are welcome

MARCARÁ

Audio length: 00:11:11

Interviewed: Margarita (P)

I: What we have been talking about health and women here in Marcara. Margarita, do you think the health attention has improved or is worse?

P: Well I don't know now because my husband has been (inaudible), but now I don't go because of my bones

I: You don't go because of that

P: No. not anymore because God says...I have gone some times and (inaudible) and in the New Testament they say the God plant is medicine. So I need money to go to the health post. When we don't have money we can't buy the medicine. So I have faith in the medicinal herbs...

I: You prefer that

P: To drink or to rub

I: Instead of going to the health post

P: Yes

I: And you used to go to the health post, do you think something has changed? Is it better? Is it worse? Is it the same?

P: Maybe has changed. When I go sometimes I have fever and they say I'm healthy. If I'm healthy why do I have high pressure and fever? They make me come back to see a doctor

I: They don't treat you

P: Yes. They say I have nothing so I don't go anymore

I: And what needs remain among the people here? What procedures you don't have? What is missing?

P: Well, sometimes they take our pressure and it doesn't show up anything. Sometimes I don't go. I use herbs and God will save me. It helps because I have suffered from osteoporosis

I: And you could treat yourself

P: Not here. They don't know. I went to Lima with my daughters. They took me x-rays, sonograms, a lot of things

I: And it didn't work

P: No. Then they sent me to Loayza hospital. They detected the liquid in my arm had spread. And they had treatment there

I: Ok. But here you couldn't have been treated

P: No

I: You have to go to Lima

P: Yes. When it is severe they send you to Lima. My arm was swollen, I couldn't do anything

I: And in the case of women, do you think they are well treated here? In everything they need? For example, labor, checkups...

P: Yes, they say they treat births very well but we didn't have that before

I: You didn't

P: No

I: And what did you do in labor?

P: We gave birth at home

I: You had a midwife

P: Yes. There were midwives. They assisted us. When it was finished we stayed at home

I: At home

P: Yes, but now if you are pregnant you have to go to the checkups

I: Checkups. Are there specialists for that? Obstetricians?

P: Yes there are

I: And men are better attended? How is their situation? Is it better? Worst?

P: Not everyone goes. They have the flu and they go. Pain and diarrheas and they go to the health post

I: And are they better attended than women?

P: No. Sometimes the pills work and sometimes they don't. Sometimes you need home medicine to cure you. Herbs....

I: And the mothers, can they get treatment during the pregnancy?

P: Yes. Everything is controlled

I: And when their children are small, can they take them to the checkups? Growth control?

P: Yes. When the children get sick they go to the health post. We didn't have that

I: You didn't like to go

P: We didn't go because there wasn't SIS insurance

I: And what should be improved here in Marcara regarding women's health?

P: Give treatment when we go

I: More doctors

P: Yes but I don't know because I don't go

I: And now about the municipality. Do you know where are they spending their money? Or they don't inform you about it

P: Well they don't tell us about it. They have meeting but sometimes we are cooking or working and we can't go

I: Sure but you have participative budget where they tell you where are they going to spend? Or no one knows where they are spending...

P: No, we don't know

I: They don't say

P: The mayor doesn't say

I: So you don't know where they are spending

P: No

I: And do you know what canon income are? Have you heard about it?

P: Yes, the mine. In Vicus there is a mine

I: A silver one

P: Yes. But here in Marcara nothing...only for the community of Vicus. They only give to them. But I don't know if they give to the mayor here. Maybe he gives it to his people because the mayor is from Vicus not from here

I: So you know there is canon in Vicus

P: Yes

I: But here you don't know

P: No. The people from Vicus talks about what they have, they have money

I: And they have a hospital? Only a health post?

P: Is a farmhouse, but now they have a market

I: They have more things because of the mine

P: Gets better. The mayor is doing that with the money but for the people of Marcara...nothing

I: And they are close

P: Yes.

I: And have you seen new investments from the municipality here in Marcara? Have you seen improvements? Roads, health, education, anything?

P: It's the same. They said they were going to buy a land and we would have a market but they don't. They have evicted some kids and they say they will build the market there

I: Just now

P: Just now

I: They haven't done it

P: No. They say they will start this month

I: And is there a negligence from the municipality? Or they care about health?

P: No, they don't. They only concern about the young. The elderlies don't have anything

I: Ok. And what do you think motivates the municipality to spend? Is it the necessities of the people? Or maybe what is convenient for the mayor?

P: Well, for the municipality workers. To pay them. I think that's what the money is for

I: If the people claims do they listen?

P: No, they say “With which money?” Every time we complain they say that

I: Ok. Thank you Margarita

P: Ok, thank you too

MARCARÁ

Audio length: 00:06:34

Interviewed: Liliana (P)

I: Ok. Liliana, do you think the health attention here in Marcara has improved? Is the same? Is worse?

P: Well I think it has improved because before it was dreadful, but now

I: And what things had improved? The attention? There are more doctors...

P: The amount of doctors. There used to be only one doctor but now we have two. Sometimes there are two doctors and a gynecologist

I: You didn't have that before

P: No there wasn't

I: Since when has it changed?

P: Well this year I have seen more doctors than last year

I: And you thing is related with the mine?

P: No...I don't think is because of the mine

I: Is not because of the mine

P: Not here in Marcara

I: And what necessities remain here? For example which procedures you need but are still missing?

P: Well. A gynecologist because sometimes we have abdominal pain and we have to go to Carhuaz or Huaraz to find out what do we have. We need a gynecologist, an urologist, all those specialties we don't currently have.

I: Especially for women

P: Yes

I: Do you have pediatricians?

P: We don't

I: And you treat the children with a general practitioner

P: General practitioner. We need a pediatrician here

I: So women are partially attended here. You don't have a gynecologist when you need it

P: Not always

I: And men don't go often to the doctor. But they don't have specialists either

P: No. They don't have specialists either

I: And the mothers, can they get treatment during their pregnancies?

P: Yes. We have...we have here...

I: The checkups

P: The checkups, everything. Since the first day of...

I: Gestation

P: Yes. Until they...give birth

I: Even the birth?

P: Birth. They attend births too here but when it gets complicated they send us to Carhuaz or Huaraz

I: So you don't have cesarean section here

P: No

I: For that they derive you to...

P: To Huaraz, the cesarean sections are done in Huaraz

I: And what do you think needs improvement regarding the women situation in Huaraz? You said more specialists but maybe more procedures, more equipment...

P: Yes. There should be more equipment. We also have a laboratory but we can't take some analysis. We have to go to Huaraz.

I: To Huaraz

P: Yes. They say they don't have supplies

I: And not even buying them

P: No

I: They don't have the equipment maybe

P: Exactly, they don't have it

I: The reagent

P: That's what they said. We have...for example...for a urine exam we have to go to Huaraz. They don't have it here

I: And now, about the municipality, do you know where is the municipality spending the money? Or they don't inform

P: Honestly I couldn't say because the municipality don't...

I: They don't inform you

P: No

I: They don't inform you about it

P: Well they have always had this...

I: Participative budget

P: Yes, but I've never gone. Most people go

I: And have you seen any investment from municipality? Any change?

P: The municipality...yes, for example I work at Cuna

I: Cuna mas?

P: Cuna mas has given us a land. They have given us a land so Cuna mas has built a...

I: Nursery school

P: Yes

I: And do you know about the canon income? Have you heard about it?

P: I've heard but I don't know which amount they have

I: Do you know if Marcara has canon income?

P: Yes but I don't know how much

I: And you say you have seen improvements in Cuna mas, but have you seen improvements in education, work...

P: Yes. They hire teachers and send them to the health posts and the municipality pays them. Also at the health post there are nurses payed by the municipality. I think they give donations to the school also. They have built classrooms and the garden I think

I: They help with these improvements

P: Yes

I: Because at the meeting they said the municipality didn't improve anything

P: Because sometime we don't know, we are not aware

I: You can't see

P: Exactly. I had a friend at the health post and the municipality paid her. She worked at the health post and the municipality paid her

I: And what do you think is the motivation of the municipality for investing? Do you think is because the people claims, because is necessary or is it because they have their own interests and this way they keep the population quite

P: I think because they see the people's needs

I: And if people claims something, the municipality gives them what they asked?

P: Yes they do. Well, sometimes they do and some they don't

I: And have the people ask for more teachers, more medical attention and the municipality fulfills these complaints?

P: Yes

I: Or they don't usually complain here

P: Yes there has been some people

I: And they listen to people

P: Yes. I had a friend that almost got kicked. But she talked and talked and they hired her again

I: She was a teacher

P: Nurse

I: A nurse

P: Yes

I: Thank you Liliana, that's all I wanted to ask

P: Ok

I: Thanks

P: Thank you. Let's go

MARCARÁ

Audio length: 00:06:35

Interviewed: Margarita (P)

I: You are Margarita right?

P: Yes

I: I wanted to ask you some more questions about health and women. Do you think the health attention has improved here in Marcara? Is it worse, is it the same? What do you think?

P: I don't get treatment here. I have Essalud, I go to Carhuaz.

I: You have Essalud insurance

P: Yes

I: So you don't receive treatment here

P: No, not here

I: And in Carhuaz? What can you say about the attention you receive? What can you say about Essalud? Is it better? Is it worse?

P: It's the same

I: The same

P: Yes

I: And do you see a difference between Marcara and Carhuaz? Regarding attention. Is there a difference between Essalud and the health post here?

P: Yes, there is a difference. In Essalud you have a quota from 7 to 9 and at 7 they are already calling and at 8 the doctors are starting to give attention

I: So they keep their schedules

P: Yes, yes

I: And the medicines? Are they better or worse?

P: Yes. They give you the medicine. They don't send you to buy much often

I: They don't send you to buy

P: No

I: So you would say the attention from Essalud is better than the one in the health center

P: Yes is better

I: And do you have specialists in Carhuaz?

P: No, only general medicine, we have obstetrician, dentist, growth control for children, nutritionists, that

I: And the insurance covers the attention with a specialist somewhere else?

P: Yes, in Huaraz. Essalud derives you to Huaraz so you can receive treatment

I: It's not the same hospital is the Victor...

P: No, is another one. By the entrance

I: Do you know what is called?

P: No I don't know

I: And the other one is Victor...

P: Ramos

I: Victor Ramos. That is from the State right?

P: From the State, yes

I: From Minsa. And what needs do you think the women have? What health needs do you thing prevail among women, treatments, specialists?

P: No, here we have almost everything, urologists, everything

I: Where is this? Carhuaz?

P: In Huaraz

I: In Huaraz

P: In Carhuaz we only have dentist, general medicine, and obstetrician. We have a nutritionist also

I: And are there any treatment women need but they can't get here?

P: Women issues they...sometimes we have campaigns

I: Campaigns

P: Of...women...gynecology

I: Gynecologists

P: Yes, they take sonograms, those things

I: To Marcara?

P: To Carhuaz

I: To Carhuaz

P: Yes

I: To Marcara they don't come often?

P: No, I haven't gone there. I don't know

I: You always go to Carhuaz

P: Yes

I: And do you think that women are well attended in Carhuaz? Are there specialists for their needs? The necessary treatments? Or not everything you need is given?

P: No, not everything

I: Not everything

P: No

I: And the other option is going to Huaraz

P: Yes

I: And they have everything in Huaraz?

P: Yes, they have all the specialists

I: And do you think men are better attended than women? Or is the same? Even if they don't go very often but are they treated the same way? Or do they have some preference.

P: No, is the same for both of us

I: The same

P: Only pregnant women, women with children and elderly people have preferential attention

I: Elderly people, no matter which gender they are

P: Yes. They have a different queue

I: Ok. And mothers can get treatment during their pregnancy and for their children after they are born?

P: Yes

I: Here, in Carhuaz and Huaraz. They can get treatment

P: Yes, yes

I: So it's covered

P: Yes

I: And finally, what do you think needs improvement regarding attention for women? Here and in Carhuaz

P: We need a gynecologist

I: You don't have one here...

P: Here. We don't have one in Carhuaz either

I: You don't have one in Carhuaz

P: No

I: And the option is going to Huaraz

P: To Huaraz

I: That needs improvement

P: Sure

I: And now...

P: We also don't have a pediatrician

I: You don't have a pediatrician

P: No

I: Now I want to ask you about the municipality. Do you know where the resources of the municipalities of Marcara and Carhuaz are going?

P: No

I: Do you know where they are spending or they don't inform you?

P: No, we don't know

I: They don't inform about it?

P: No. If they inform between them...

I: They don't tell you where they are spending

P: No, we don't know

I: And do you know about the canon income?

P: Yes I've heard. It was more money before and now is less

I: And do you know which municipalities receive? Marcara receives?

P: Yes, they receive

I: And have you seen any investment from the municipality lately? Have you seen any improvements in Marcara or Carhuaz? More schools, more health posts?

P: No, I don't know

I: You haven't seen any difference

P: I haven't seen

I: You haven't seen any sign that shows an investment from the municipality

P: No

I: Everything remains the same

P: Yes

I: And the last thing. What do you think the municipality has in consideration at the moment of spending money? Do they worry about the people's situation? Or they spend so people won't complain or maybe is so they can say they did works?

P: I don't really know

I: How do they decide how to spend the money? For example when the people ask something, the municipality does it?

P: I think in other places they do

I: And in Marcara?

P: Marcara is bigger. It has...I don't know how many farmhouses

I: And when you complain, do they give you what you are asking for?

P: Yes they do

I: They do

P: Yes. I think they give when people asks

I: Ok, that was all I wanted to ask you. Thanks

P: Ok

In Depth Interviews Local Residents: Canta

CANTA

Audio Length: 00:09:04

Interviewed: Petronila (P)

I: About what we were talking before I'd like to ask you some specific questions

P: Ok, ok

I: So you tell me what do you think

P: Ok

I: Do you think the health care in Canta has improved, it's worse, it's the same...

P: The same

I: The same, you think it's the same and it should change for example

P: It should. Mrs Juana who is the obstetrician

I: Right

P: We should have someone to take us x-rays, ultrasounds, baby staff. We don't have that. There's equipment but no professionals.

I: You have equipment

P: Yes

I: But no one knows how to operate them

P: There used to be a lady. Two years ago maybe she left. She took us those tests

I: Ok

P: She left and no one does anything

I: But the equipment is there with no one to operate it

P: Yes

I: You would need an expert

P: Yes, of course

I: And what health needs do you think remain among the women in Canta. What do you need and the health post or center doesn't have

P: The births. They derive you to Lima now. They do the checkups at one, two, three months but when you have to give birth they send you to Lima

I: From the seventh month maybe?

P: Yes, then you have to go to Lima

I: And is there another disease women have and there's no treatment here? Gynecologists, the papanicolaou test maybe

P: They have that test here but you have to wait three months for the results

I: There's no good treatment then

P: No, there isn't

I: It's slow

P: Yes

I: And do you think women are well attended?

P: No

I: You are well attended

P: No, no

I: They know how to treat you

P: No they don't. As we said some doctors ask you what's wrong with you and you tell them what you feel, back pain, cough, phlegm, etc. And he gives you the prescription and that's it. Not like other doctors that examine you with special devices.

I: The other ones do it quickly

P: Yes

I: And you say there aren't enough experts for the women needs, for example no gynecologists

P: There are only nurses here, an obstetrician and a doctor and a miss who attends the children

I: And they know how to treat women? They know how to talk to them or they treat them bad?

P: When they give us lectures they explain us everything but at the hospital they don't

I: You have group lectures for example?

P: Sometimes

I: And about which topics

P: About child abuse, how to take care of children, feeding, things like that

I: Ok, mostly about children right?

P: Yes

I: And they call the women in Canta and the districts nearby?

P: Yes

I: And for men? Do you think they are better cared? You said they don't go often to the health center

P: No, they don't. Men don't usually go to take care of them

I: And the ones that do? Are they well treated? Do you think the attention is better for them? Maybe faster?

P: No, it's the same. They queue if there are patients and have to wait if the doctor is at lunch until he comes back. It's the same

I: And the mothers? You say they can receive attention during pregnancy until...

P: Seventh month

I: Until the seventh and then to Lima

P: Yes, then to Lima

I: And they can treat their children here or the attention isn't good...

P: No, the attention is good

I: It's quick

P: They make us wait sometimes they ask you to come with your husband, children, a companion, someone you are going to travel with. Money for the ambulance's gas so they can take you and if you don't have for the gasoline they cover it and then you have to repay it

I: They charge you to go to Lima

P: Yes

I: And the checkups for the babies? The newborns get treated here or...

P: Yes

I: They derive them

P: No, they get attended here

I: It has to be sever for them to...

P: Yes, if you can't give birth or a dry birth, c-section, they derive you to Lima

I: And what should be improved here in Canta? Which improvement do you need here

P: A good obstetrician

I: The current one isn't good

P: No, she's already tired

I: She's grumpy

P: (laughs)

I: You want an obstetrician who treats people right

P: Yes. Twice a week comes a younger one. Everyone waits for her, she is younger, and she's updated also

I: The other one is older a little bit outdated maybe. What else would be good to implement for women in Canta? What is missing? You need a better treatment, they don't know how to explain thing to you, there is a lack of tests here maybe

P: Yes, a better treatment for women and better explanations so we can understand step by step our treatment.

I: They don't usually explain much

P: No they don't

I: They prescribe you and...

P: Prescribe us and tell us to go

I: ok...

P: And the children also, the feeding issue, they should explain us what they can and can't eat right?

I: More campaigns for example

P: But they don't do it

I: And at the health post they explain to you or...

P: Some. "Madam you have walked, you are tired" But the others don't explain anything

I: They only prescribe you

P: Yes and nothing else

I: And the attention is short maybe

P: Yes, very quick

I: Now I'd like to talk about the municipality. Do you know where goes the money from the township? Or they don't tell you where are they spending?

P: Sometimes they don't. Right now I think they are investing at the road...

I: The new road. And can you know where are they spending? Can you ask? How do you find out the expenses?

P: At the open assembly, we ask

I: And they tell you

P: There we know what are the expenses, but only if we have the assembly

I: They don't usually do it?

P: Sometimes they don't

I: Once a month? Every two months?

P: No, once a year. Sometimes not even that

I: And have you heard about the canon? The canon that municipalities receive?

P: No, no

I: You've never heard about it

P: No

I: Do you know if the municipality is investing in health care? In the last assembly did you talk about health?

P: Nothing. Not even education

I: And do you propose these expenses? Or you haven't talked about the subject?

P: Yes. That's why I tell you. When they are campaigning they offer good hospitals, good doctors, good health posts, but they don't deliver afterwards

I: And at the assemblies...

P: We complain and they say it's being done, they are making the procedures but at the end no one makes anything

I: They don't deliver

P: They don't

I: And previous administrations?

P: Nothing

I: Do you recall an administration that actually kept their word?

P: Nothing

I: And what would you say it's the motivation of the municipality. For example, why they invest in the new road and not in health? Do they have some interests

P: They say it's going to improve the town

I: But what do you think, why are they spending? Because of the people welfare, because you complain or is it politics...

P: No, it's politics

I: Politics. Do they listen to the people? If you complain they do something? If you tell them you want a new health post, would they make it happen? Or maybe...

P: They listen but they make excuses. They make other things and tells you to wait but nothing happens. They don't give us solutions

I: Ok Mrs. Petronila that's all I wanted to ask you. Thank you for your time.

P: Ok sir.

I: Nice to meet you

CANTA

Audio Length: 00:09:19

Interviewed: Pilar (P)

I: Ok, the questions are from the same topic we've been talking about. I'd like to know what do you think about more detailed things ok? For example, do you consider the health in Canta has improved? Or is the same or even worse?

P: It's the same

I: The same and why do you think it's the same? What is missing?

P: Because there are the same people as always. Since I was little they were here and they don't give you attention. They prefer their families...it should be impartial right?

I: You think they treat better their families and friends

P: Yes because it has happened to me

I: They don't treat everyone

P: No

I: And what needs does the people here have? What things are important and you don't have?

P: We are lacking a pediatrician, an eye doctor...

I: Ophthalmologist

P: Yes and for the teeth

I: A dentist

P: They remove teeth but if it's difficult they send you to Lima

I: All of that is missing

P: Yes

I: And before you had that?

P: No, there wasn't

I: You didn't have and there are no plans of bringing it

P: No

I: And for women do you think there's a special need? Pediatricians you say

P: Yes

I: Maybe a gynecologist, a particular test

P: Yes because right now we don't have, they only take the sample

I: Goodbye madam

P2: Very grateful sir

I: Thanks. You were saying other thing that are missing for women. Papanicolaou, the tests?

P: Yes, we need a laboratory to take tests. They only have for some urine tests and blood for pregnancy

I: Only pregnancy tests

P: Yes. If it's severe they derive you to Lima

I: They derive you to Lima. And women here are well treated? Are they shelved from health?

P: Yes, they don't attend us

I: There are no experts for your needs?

P: Yes, there are not good doctors, experts or...

I: Obstetricians?

P: Yes

I: And men? Are they better treated? It's not important to them?

P: Well they don't usually go. If is not sever they won't go. They go to the pharmacies

I: There aren't experts for men either...

P: No, there aren't. Canta is really bad now

I: And mothers? Can they receive treatment suring the pregnancy? Or is a poor treatment?

P: No, the pregnant are attended. The checkups. Baby's heartbeat, growth, everything

I: Ok, but there isn't ultrasound

P: No, we don't have. Not even transvaginal ultrasound

I: Ok and you can receive treatment until before the labor

P: Yes

I: And if its natural birth

P: Yes. If it's risky they send you to Lima

I: Because there are not equipment here

P: Yes and if it's early morning even worse because there is no doctor or obstetrician

I: And what are the options

P: Lima. If you have insurance they send you right away. They call the ambulance. If the driver isn't there sometimes it takes time and the people prefer going in taxi

I: Ok. Do you think mothers can attend their children in Canta?

P: Here it's not enough. We are in bad shape here in Canta

I: There's not attention for children either. And you think this should be improved? The treatment, the staff?

P: Of course, they should improve it soon. We need it

I: Ok

P: Everyone that treats here at the health post. I think they should change the doctors. Bring better ones. They bring new ones recently graduated and they don't know

I: Lack of experience

P: They don't know. They have graduated last year and already working. They don't know. There is no confidence. They should bring doctors with experience.

I: With experience, not recently graduated. Now I'd like to ask you about the municipality. Do you know how the municipality is using their resources recently?

P: No. They don't tell us this. They don't tell us anything

I: They don't tell you where they are spending

P: No. If they have meetings is among them right? Inside the municipality

I: And they don't communicate it to the people

P: No. In Canta we don't know anything. They take it personal. They ask why are we gossiping around but they don't say anything.

I: There's no way to know

P: They do but to get money. Now for the easter and 28th of July. They get money then. We work at the streets selling and we have to pay for a little spot. 70 soles for three days

I: They charge you for selling

P: Yes. Where will the money go because we don't know what they are doing

I: And have you seen anything the municipality has invest in? Besides the new road

P: No, Right now everything it's the same

I: You can't see an investment from the municipality

P: No and there isn't a control of the animals here either. I live close to the canal. There are not schedules, no control. Every night they kill animals there and that's no good

I: Do you know about the canon income for the municipality?

P: No

I: You don't know about that

P: No

I: And you know if the municipality is investing in health lately?

P: No. Not that I know of

I: There is no more doctors or posts or centers, nothing different

P: No, nothing different

I: So you would say there is a lack of interest in the town health from the municipality?

P: Yes

I: And what do you think that motives the municipality to invest in certain things? The people complaining, politic interests or the benefit of the people?

P: No. I think the people should complain

I: And they listen when you do it?

P: No

I: They don't

P: No

I: And the municipality decides in what to invest?

P: Yes, they do. At their meetings

I: And you thing this investment has some preferences? Some cronyism?

P: Yes I think so. They are doing the new road but only below and they should do it everywhere. There is missing al the border to the bottom. They have construct in Chaclar. Everything else is dust and stones

I: Ok

P: And there is nothing. They dump stones there and that's it. They charge us but they don't clean afterwards.

I: And they don't tell you where the money goes

P: No, they don't

CANTA

Audio Length: 00:07:15

Interviewed: Yackelin (P)

P: Mr. Henry told me you were going to call

I: Yes I would like to ask you some questions about what we talked. Is very short, is it ok?

P: Ok

I: I wanted to ask you if you think the health care in Canta has improved, is worse or is the same

P: It has got worse

I: Worst. Why would you say that?

P: Because there used to be doctors who attended at nights but now there isn't

I: Only at day?

P: Yes. 8 to 8 and at night only emergencies

I: This is at the health center in Canta right?

P: Yes

I: So you think it has gotten worse because of that. Is there other reason? Maybe the doctors aren't good enough?

P: The doctors aren't good and they change them always. They bring one and another. That's the problem.

I: They change them regularly so you don't know them

P: No because they change

I: And what are the common needs in the town? Which ones are attended and which ones are missing?

P: There should be a doctor here. It's important specially for the births. They are derive to Lima

I: To Collique

P: Yes

I: Do you think there are things missing regarding the women?

P: Yes, the analysis

I: You can't have a papanicolaou test here

P: No

I: You have to go to Collique

P: Yes

I: And the results take long to come back? You have to go there to look for them?

P: A doctor goes to get them but they take too long. Three months.

I: Ok

P: It's so late you don't know what you have

I: Ok. Do you think women are well attended?

P: No, I think it's not enough

I: And men? Are they better attended, worse or is the same.

P: They don't go to the health center. There are few men that go. Children go with us but adults are few.

They go to the pharmacy and tell the pharmacist their symptoms and he sells them pills. And men take it

I: They don't go. And during pregnancy women can get treatment there but not give birth

P: Yes

I: And...

P: They do their checkups but some labors are difficult. The girls scream or cry because of the pain and the doctor gets upset and derive them to Lima for a c-section.

I: They prefer not taking risks. They deliver the easy ones

P: Yes

I: And when the children are borns they get treatment there?

P: Yes. The checkups and vaccines they can have here

I: Ok. So what do you think needs improvement regarding women attention? You said specialists, new doctors, what else? Maybe analysis, procedures, equipment

P: Analysis to know if you're pregnant. When you don't have your period you might be pregnant but there is no way to know here. There used to be but now there isn't

I: There used to be

P: Yes. In Canta there was blood and urine tests. But now there isn't

I: That's another service that no longer exists like the night shift. Now I'd like to ask you about the municipality and the municipality expenses. Do you know where is spending the municipality?

P: They're making new roads now. They are constructing. Now that Easter is coming

I: Ok but in this administration of almost two years do you know what else they have done? Have you seen other works here or the only thing are the roads?

P: The only thing I've seen are the roadas. The roads and the upgrade of the stadium

I: The upgrade of the...

P: The stadium

I: So you hadn't seen any investment in health from the municipality

P: No

I: They hadn't spent in anything

P: No

I: Do you know what canon income are?

P: No

I: What do you think encourages the municipality to spend? They do it because the people ask for it, because it's convenient to them or because they care about the people

P: I think because it's convenient to them. When they enter they promise a lot of things and to keep our mouths shut they do one or two works so they can say "I invested this amount"

I: So it's more political convenience rather than concern for the people

P: Yes and that's with every candidate. Here in Canta is always the same

I: Ok. Thank you for your time. That was everything I wanted to ask you. Thank you

P: Ok, thank you. Good bye

I: Good bye, thanks

OBRAJILLO

Audio Length: 00:12:38

Interviewed: Irene (P)

I: The health treatments for people here in Canta, Obrajillo, Ancash, different places that normally hasn't been well attended. And what is the municipality doing regarding this. So...

P: The council

I: Yes, the authorities

P: At Canta

I: At Canta or here

P: We are part of Canta

I: Yes, but you have a mayor here right?

P: No, we don't have a mayor

I: Do you have a mayor in Obrajillo?

P: In Canta but he commands all the towns here. Obrajillo, San Miguel, Huayhua I think

I: Ok

P: He commands here

I: Ok. That's why are here to ask you some questions and I'd like to ask you... I'm going to record our conversation but it will remain only for us. Otherwise I won't remember what we talked so it's in order to remember this later ok? What's your name madam?

P: Irene Pagán Ramón

I: Irene Pagán Ramón. And how old are you?

P: 90

I: 90 years. Do you think the health care here in Obrajillo has improved, has worsened or is the same?

P: It has worsened

I: Why has it worsened?

P: It's worse

I: There are less doctors and...

P: There aren't good doctors, not good treatment, nothing

I: There's nothing. And when you go to Canta...

P: In Canta

I: Is it better now?

P: They have bad doctors

I: Do you have a health care here in Obrajillo?

P: We don't have a doctor here, nothing

I: You have to go to Canta

P: To Canta. We have insurance but for what? They only take our money, they don't spend in medicine. Because the state sends medicine right?

I: And do they give the medicine to you?

P: They give you some and they charge you. They tell you the price

I: And ask for money

P: Yes

I: And they shouldn't

P: We should have to give money because the help comes from the State

I: Ok

P: Why would they insurance us you tell me

I: And have you tried to complain about this?

P: We have. I went with mi daughter to tell them there aren't good doctors, good medicine

I: And you have to go all the way there right?

P: Yes

I: You don't have a health establishment here

P: We have to go by car. They charge you 2 soles. 2 for the going and 2 for the return. I don't have a job, I have no income. What can I do? I used to go by foot but now I can't. If I were healthy I would walk

I: It's half an hour by foot...

P: More

I: An hour

P: Yes

I: And do you think there are health needs here in Obrajillo?

P: Yes

I: The people gets sick? What are common diseases here in Obrajillo?

P: We suffer...now there is no food like before. We had corn, potatoes, everything. But now we don't

I: There's nothing?

P: Now you have to pay. They come from Junin to sell us potatoes. They sell one potato at 80 cents, 1 sol, 2 soles. We don't have to eat

I: So there isn't good nutrition

P: No, there isn't

I: And there are stomach problems?

P: We used to sow corn, potatoes, peas, everything we sowed but not anymore

I: Thee doesn't have strength for example? They have anemia...

P: Malnutrition. For example I don't suffer from anything. I don't spend on medicine, I don't make my children spend on me. I treat myself. When I have gripes I take milk or I take a pill or natural herbs and with that I get better

I: But you don't go to the doctor...

P: They don't give us any attention

I: Right. Do you think women have needs that are not covered? For example regarding babies, children. Is there anything missing?

P: They have to go to Lima to give birth now. They can't in Canta

I: Not in Canta. So it would be...

P: There's no attention

I: You have the necessity of a doctor close to home then

P: Yes

I: For the children controls, when they are pregnant

P: Yes but we don't have that

I: And with the children, they have checkups?

P: They run to Lima

I: They have to go to Lima

P: To Lima

I: When they are babies...

P: To Lima so they don't die. The ambulance comes from Lima and takes them. In Canta there's no attention

I: So would you say the women are well treated? They aren't well treated...

P: No, they're not. It's not like before

I: They were better before?

P: Yes

I: And are there specialists for women needs?

P: There's a...I have a cousin who went to Canta for treatment and they didn't give her proper attention. And why is she sick? Her baby has 5 months and the mother is sick because there's no attention

I: Are there specialists?

P: No

I: In women, elderly, children...

P: There used to be

I: Before?

P: There used to be

I: And what happened? Where did they go?

P: There used to be but now there isn't

I: There isn't?

P: No there's not

I: And where were they? In Canta?

P: In Canta

I: And men? How is health care for men? Do they go to get treatment or not

P: They don't. They take home medicine or go to Lima sometimes. And sometimes they die

I: They don't like to go to the doctor

P: For lack of treatment they die

I: But they like going to the doctor? They normally go? They don't like it?

P: No

I: They don't like to go

P: No, if they don't treat us, they don't give us good medicine, why would we go?

I: The men don't go either. Are they bad treated as well?

P: No, no. They go to Lima

I: Are they better or worse than women?

P: Worse

I: Worse? And regarding mothers and pregnant women...

P: When they are like that they treat them, they don't listen to them, they wash them if they want to. In Lima they do everything.

I: And the children are well treated?

P: In Lima

I: In Lima, and here?

P: Not here

I: Here there's no attention for children. What do you think needs to be improved regarding health care? What new things do you need? What should change?

P: New doctor, new medicines, attention. The State sends us. If they didn't send we wouldn't claim but we complain because the State is supposed to give us.

I: You know the State gives but nothing comes to you

P: I doesn't

I: It stays at...

P: Stays

I: At the posts for example

P: And they do business

I: They profit with it and don't give it to you

P: No

I: And now I'd like to talk about the municipality. Do you know where is spending the municipality? Do they tell you?

P: I don't know. I don't go to the municipality because there is one in Lachaqui, there used to be one in Ramon, San Miguel. He did what he want but this is new.

I: And you don't know in what they are spending

P: We don't

I: And did you know before?

P: We had to ask for roads. We have one below. We wanted that one ready for the holidays. We are three towns, Huacos, Obrajillo and San Miguel but they didn't do it. The roads are covered

I: There is nothing yet

P: Why? Because he doesn't care about us

I: And he hasn't invest

P: Not even the president of Obrajillo or Huaco or San Miguel

I: And what are the investments of the municipality then? Or they don't invest?

P: They don't

I: Nothing? They haven't spent in anything?

P: We have to claim

I: You have to...and when you complain?

P: Complain for something

I: When you complain do they do anything?

P: Now the president of Obrajillo has to give a trade to Huacos and San Miguel. And the three mayors have to go to the new mayor and ask for new roads. We need the road here, from below to Canta but we don't have one

I: When you asked for roads or better attention...

P: Now there's an assembly, every month

I: And they listen to you?

P: Yes, sometimes they don't. but the new president doesn't listen to us. That's why I'm upset. The Lord is going without a band. They used to go with a band now he doesn't have anything

I: And you talk about it at the assembly...

P: We have to talk about that with the community, we go to talk at the assembly

I: Do you know what canon income are?

P: No

I: From the municipality?

P: No

I: And have you see any improvement lately? Is the same, something is worse?

P: The same

I: The same?

P: Yes, nothing good

I: Nothing has improved from the municipality?

P: No because if there had been any improvement we would have a new road and the people from Lima would come here. They have to go to Canta first and that's because the lack of concern from the municipality

I: You think there is a neglect from the authorities?

P: Neglect

I: And regarding the health care is there a neglect also?

P: Yes, neglect

I: And what would it be the motive of the municipality to spend...

P: I have been in two festivities. I'm an elderly here in Obrajillo. I've been in festivities, I'm a widow 27 years now. My parents died and my father left an inheritance. I didn't know he was going to die. I loved him more than I did my mom. And he didn't left me anything. He gave me a little room and my brother took everything else. He took advantage, he only likes to drink

I: Right. And what is it that motives the municipality to spend? Convenience, or maybe to get more votes for them...

P: We should find out

I: Do you think the municipality cares for the population?

P: They have their rights

I: Or they do what they want

P: What they want with the money. They need to improve. The three towns need to improve. The new mayor should do something to improve Obrajillo, San Miguel, Huacos but he doesn't do anything

I: They spend in what they want. And when you complain do they listen?

P: They don't give us attention because they are from Lachaqui. They have made improvements for their town. They asked and the State gave them but here in Obrajillo nothing

I: You say the mayor of Chaquis? What did you say?

P: Of Lachaqui, Ramón

I: Ramón de Chaqui

P: Of Lachaqui

I: And he hasn't improved

P: Nothing has improved in Obrajillo but in San Miguel yes.

I: And in San Miguel is the same mayor?

P: Yes. He commands San Miguel, San Buena and Huacos. But not Obrajillo

I: And they haven't sent anything to Obrajillo

P: Nothing

PARIAMARCA

Audio Length: 00:09:13

Interviewed: Susana (P)

P: Susana

I: Susana. You live here in Pariamarca right?

P: Yes

I: We are here to have group conversations, we came yesterday at night also

P: Ok

I: To talk and find out how is the health situation in Canta, Pariamarca, Obrajillo. We come in behalf of the University of Georgia in the United States and we are studying how the municipalities work. If they give the necessary health care. So while we wait for the people to arrive I would like to ask you some questions. Do you think the health care here in Pariamarca and the province of Canta has improve, it's worse, it's the same?

P: We lack of specialists

I: There's no specialists

P: No, only a general practitioner and an obstetrician. If we want a gynecologist there isn't

I: There isn't. Was it like this before?

P: Yes

I: It's the same?

P: Yes

I: It hasn't improve

P: No. There's only a general practitioner and an obstetrician

I: A general practitioner. What are the needs here. What is missing? Which are the common diseases among people?

P: The flu, stomach. Other diseases they have to go to Lima. In Canta there is no attention for that

I: And is there any special need for women? Something you don't have here?

P: Yes, gynecology

I: There's no gynecologist

P: There's no gynecologist

I: There are obstetricians

P: Yes

I: You have that

P: Yes

I: But birth assistance you don't have

P: Yes we have. The obstetricians take care of that

I: And you think women are well attended?

P: There's no many patients here

I: Not many patients

P: No

I: Because they don't usually get treated or they are not informed...

P: Here are few women with babies. They don't have many babies

I: They don't have babies

P: Two or three. I had four

I: And you go to Canta for treatment

P: Yes I went to Canta and they derive me. If it's not severe they treat me here

I: At the post

P: Yes

I: And the checkups were here or you had to go to Canta

P: Yes, sometimes the obstetrician came

I: There's an obstetrician here?

P: Not now

I: Only technicians

P: Yes

I: And she did the checkups or transfer them

P: Transfer them

I: There are no specialists for women

P: No

I: For children?

P: Pediatricians. No

I: Neither

P: Only General practitioners

I: And do you think the men are well attended? Or they aren't? They go to get treated?

P: They only go when they are in pain

I: They don't go often?

P: No

I: Are there specialists for men?

P: No, only general practitioners

I: And the mothers...are they well treated during and after the pregnancy? It's not enough?

P: They have their checkups. If it's complicated they go to Lima

I: And in Lima they get good treatment?

P: Well it's complicated. If it's an emergency is fast

I: And if not...

P: No, They make you wait. If you can't find an appointment they make you wait days. Yo have to come back

I: Ok

P: Go back or go to a particular

I: And when you go to a particular service, you go to one nearby Collique?

P: No, to Solidaridad

I: Which is the Solidaridad nearby?

P: There is one in Comas

I: In Comas

P: Yes. La Merced it's called. My daughter took me there

I: And it costs?

P: Yes

I: And the attention is better? Paying is better?

P: Yes, they treat you there

I: It's quicker

P: Yes. In Collique they make you wait or come back other day

I: You have to come back

P: Yes, more than once

I: And the attention for the children, the little ones? They have to go to Collique also?

P: Yes. They derive you to Collique

I: What would you say needs improvement here in Canta regard the women health situation? Specially women

P: Specialists

I: Specialists, gynecologists...

P: Gynecologists, pediatricians

I: Obstetricians?

P: There are two in Canta I think

I: And they can handle everyone

P: Yes. They go to other towns also

I: They make campaigns

P: Yes, to the villages. They used to I don't know if they keep doing it.

I: Now regard the municipality, do you know where the money from the municipality goes? What are they investing on? Do you know?

P: No

I: You don't know

P: No

I: Is there a way for you to know? Have you try or they don't tell you?

P: The mayor comes and has meetings. He tells there I suppose

I: But you don't know in what they are spending

P: No, no

I: And have you heard about the canon income? Have they talked about that?

P: Maybe at the reunions. I don't go so I don't know but maybe

I: But they don't inform the people

P: No, no, no

I: Have you seen any improvement at the province? Something new. Health, roads, education, jobs...any improvement?

P: Everything is the same. They promise roads in April but we don't know

I: You don't know of any investment?

P: No, no.

I: You think there is a lack of interest from the authorities?

P: Yes, they have to care about us

I: They are not taking care of you?

P: They don't. Sometimes they say they will go and talk to the mayor

I: And they inform you?

P: When they gather I suppose

I: And what motives the municipality to spend? Because of the needs of the people, because they have complain, or maybe for you to stop complaining

P: The communities are the ones that go

I: To complain...

P: To ask for help and support for some works

I: And they listen to you?

P: Yes

I: They listen or...

P: Yes

I: He listens to you

P: Yes, this mayor does. The former one didn't

I: He didn't hear you?

P: No. Because sometimes we didn't vote for him

I: Ok. So everything is for the votes?

P: Yes. If you don't support him he won't support you

I: He invest in the people who vote for him

P: Yes

I: And the villages that supported him have more investment

P: Yes

I: That happened here

P: Yes. Pariamarca didn't support much

I: and who does he support?

P: Canta and other town

I: San Miguel

P: Yes. Pariamarca didn't support him so he won't support us.

I: He doesn't do anything

P: Not anymore

I: Ok madam, thanks

PARIAMARCA

Audio Length: 00:09:08

Interviewed: Helga (P)

I: You are Helga, you work as a technician at the health post right?

P: Yes, I'm a technician and the responsible

I: The responsible so you have people in charge or are you alone?

P: We used to have a nurse from SERUM¹⁶

I: She was at her last years

P: Yes

I: From which university?

P: She is from Callao, the University of Callao

I: Ok. Do you think the health care here has improved, it's the same or it has worsened?

P: We're trying to improve it by assigning a nurse to every health post...

I: That's new?

P: Yes, that's new. At each post there used to be only a technician but now they will work in company of a nurse

I: A nurse

P: We will expand the staff a little bit more

I: For example the person from SERUM is doing nursing jobs

P: Yes, she takes care of the nursing. But also we support each other in everything outside the post. She works with the elderly...

I: Ok. You do everything that is needed

P: In general. Not only takes care of children

I: So this will start next year or this year already?

P: No, this year. The chief of the health network in Canta told us in February at a reunion that a nurse was going to be incorporated to the health posts that have only a technician

¹⁶ Marginal Rural and Urban Health Service

I: And the nurse will be always there? Like the technician?

P: Yes, always

I: So you think is an important improvement because it will be twice of help

P: Yes. More support, more work, yes. It's an improvement

I: And what are common needs among the population. What diseases are more common, what things the people need to learn regarding health

P: The majority of towns have respiratory diseases, diarrhea

I: What respiratory diseases? You said there's no TB here

P: No. There hasn't been reported

I: What kind of diseases then? Pneumonia?

P: Pneumonia either. It's pharyngitis, bronchitis

I: Milder things

P: Yes. Illness that can be treated at the health post

I: And regarding women is there any issue that needs to be solved?

P: Yes. A lady said gynecologist right? That's it. We need a specialist

I: Sure

P: We have obstetricians that come once a week

I: To the post

P: Yes but it's not enough. They derive you to a gynecologist. And in Canta we don't have one

I: Because the obstetrician doesn't treat...

P: Deeper issues

I: And you think this is important to women

P: Yes, very important because you can detect cancer early

I: And you don't do analysis here? The pap...

P: We do the pap here

I: You do it

P: Yes, what we send to Canta is only...

I: Samples

P: Yes

I: Biopsies. And you think women are well treated? You say there aren't specialists. Do you think that is a kind of neglect?

P: When there is an emergency we treat them. We treat them with what we have here

I: Ok

P: And if we can't handle it we derive them to Canta

I: Ok. And you think the health care for men is better or worse. They get less sick or more. They don't like to go to the doctor...

P: Not much

I: They don't go

P: No

I: Even when they are sick?

P: Yes. They say they are in pain but they don't go

I: You think this is more about manly pride? They don't like to be treated?

P: No, no. I think it's because of time. Because they have their...

I: They have work

P: Yes

I: They don't have time

P: Yes, exactly. I think is because of that

I: So they are bad treated because they never go. But is an issue about themselves

P: Yes. Maybe carelessness?

I: And they only go if it is an emergency

P: Yes when they have a lot of pain

I: And you think a new schedule could help? More late at night...

P: That's what we've done...for 4 months we've been having a double shift. We are from 8 to 8 with the nurse.

I: And at that time there were more men

P: Yes. We try to give treatment to the elderly who come back from the field at 6

I: Because if they come back from the field and the health post is closed they won't seek treatment

P: Yes

I: And what needs improvement regarding health in general and considering the women. You said specialists but is there anything else...

P: Yes, for example the medicine

I: More medicine

P: Yes. There are times we don't have medicine

I: They don't always arrive?

P: They give medicine to us but we depend of Huacho region and they sometimes don't buy the medicine and it doesn't arrive

I: They arrive late or it never arrives?

P: They almost never arrive

I: Never arrive

P: No

I: And you have to ask for it

P: We have to wait and there is where problems start. Because a patient comes and I don't have the medicine, what do I do? I have to derive them to Canta

I: Or send them to a pharmacy?

P: No, I can't prescribe. I have to send them to Canta. I can't ignore the other establishments

I: So even if it's a simple medicine like a panadol or aproxeno you can't

P: No. They are mostly people with SIS¹⁷

I: SIS gives it to them

P: So I have to derive them to Canta and there the doctor takes care

I: And regarding the municipality, do you know where are going the resources of the municipality lately? Do you feel you are not being informed about this?

P: No, I think they don't inform us. We are very close to Canta but they never come to visit us

I: They never come here

P: For example a social assistant or anyone, they don't come here to see the health post, what we don't have, what we need. They don't come and I can't even meet them. One time because of ENSO the mayor came and said this wasn't a dangerous zone. I told him it was because with a strong rain the mountain comes down and this will be under risk. He told me that he had been informed this wasn't a risk zone. Then why did he come? I wonder. He never came back after that.

I: So they only came to say it wasn't a dangerous zone

P: Yes, only that

I: And you said you know about the canon...

P: Yes, we know there is an amount of money intended for children under 3 years old, kuna mas

I: A canon income

P: Yes, but I think is more for Canta because there is more population there. Paríamarca and Cachua are left behind because there are few children and pregnant women. They use Canta because it has more population

I: And do you know where is the municipality investing the money? Do they say where are they investing?

P: No they don't

I: You know this because of your position and because you have access to more information?

P: I know about it because when we gather they inform us. Your municipality has this money, they receive this amount

I: From canon

¹⁷ Integral Health System

P: Specifically for children. They send money but if they don't give it to you well...

I: So the people is uninformed

P: Yes

I: Have you seen lately any investment from the municipality? For example education, jobs. Have you seen an improvement in any of these subjects?

P: No

I: Not even in health

P: Here the schools have an annual income for infrastructure

I: For the school year

P: Yes, that's from the Ministry of Education not the municipality

I: Ok. And the municipality hasn't...

P: Not that I know of

I: Ok. And what do you think motivates the municipality to spend their resources? Because the people complain or maybe is a Mayor conviction?

P: I think the people don't complain

I: They don't

P: No. We don't unite and go to claim what is ours. And because of that they take advantage

I: And you think the investment is more like a political convenience for voters or maybe to keep the people without complaining

P: Yes. I think they do that so we don't bother and they can...

I: So they don't really have interest in the people's wellness

P: No, they don't have

I: Ok, thank you

P: Ok

Annex H: In-Depth Interviews with Experts

Audio Length: 00:22:19

Interviewed: Javier (P)

I: Ok. The first one is, what is your name?

P: Javier Herrera

I: And what is your position?

P: I am director of research at the IRD¹⁸ of France

I: Ok. And what topics do you normally see in your work?

P: Well there are topics related to poverty, poverty dynamics, poverty traps, subjective poverty, labor market, inequality and methodological issues about my vision of poverty, poverty maps, etc.

I: Ok. About the questions, the first one is about the general health situation. Given the current context, which is already mid-2016 prior to a change of government, how do you see the general health situation in the country?

P: Well, to give an answer I think we should give an answer disaggregating regions. The health state of the population is quite contrasted between different regions, still it prevails much centralism in Lima where the main health supply is concentrated. The other is that we have had a period of sustained growth quite high and this has also had an impact on the health issue. One of the indicators we can observe is that child malnutrition, for example, has declined quite significantly and this largely by economic improvements, but also because of social programs.

I: Do you think there has been a substantial change, like reducing chronic malnutrition, in several dimensions of health or maybe just one that was the only effect of growth or some other kind of improvement or worsening?

P: Let's say there has been a slightly contrasting situation. While there has been an improvement on the issue of malnutrition, on the one hand we must remember that the urban-rural gaps still remain high. This has to do with the decline of the indicator, simply by changing the urban and rural population structure. No coincidence that among rural has fallen sharply too, part of the decline of the indicator, the rural population has decreased for the benefit of the urban population. The other thing is that this result is also compared in terms of populations. We have a decline in child malnutrition largely as a result of social programs, the conditioned program "Juntos" which is a program in which the transfer is conditioned precisely to the sanitary control of mothers regarding the license vaccination of children, for example, but also what is found in other domains is that the situation has worsened. For example in the case of anemia of women, in particular, is quite high and has not declined with economic growth, then economic growth, say improvements in the economic situation, is not the only factor explaining the situation of the health. Why? Because health is largely a service that is provided by the state and the state can intervene regardless of the

¹⁸ Institut de recherche pour le développement

level of economic cycle. The Nobel Prize, Deaton, has shown how in Africa in particular, without there having been a substantial improvement in living conditions, infant mortality rates have declined significantly through access to vaccines that were previously inaccessible. In Peru we have also had this decline long ago in the sense that the infant mortality rate has declined very sharply, but morbidity rates are maintained by the issue of sanitary conditions and lack of access to safe water and this is both in urban areas and in rural areas and is a very strong impact factor in malnutrition. Malnutrition is a problem of food intake and is a problem, too, mainly sanitary.

I: Returning to the case of women, as mentioned, specifically talking about them, is there any particularity regarding their health situation? As saying of malnutrition or perhaps on the issue of pregnancy, fertility...

P: Well, here there have also been advances and setbacks. Recall the initial stage, forced sterilizations, on the one hand, in the Fujimori government. On the other hand, the decline in the issue of control of the number of children women want to have, say reproductive health, when the Ministry of Health decided to cut contraceptive programs where women could manage and plan better.

I: In what year was this?

P: That was during the government of Solari, the time when he was health minister and then health minister was Carbone. Both ultra-religious conservatives decided to backtrack on all these programs contributing to maternal health. Perhaps another important issue of women's health, which has to do indirectly to this point is the issue that there has been a significant reduction, nevertheless, in the number of children per woman, tied to the rate of child survival. Because infant mortality has decreased very strongly, urbanization has advanced not only in Lima, but in the other large cities, the level of education of the general population has increased by twelve points percentage people with higher education level in the last twelve years. All these are factors that also contribute to changing the health conditions of the population.

I: As for the change in the health situation, for better or worse, of these two sides that has been in recent years, do you think that women have been more or less affected than men, they have had perhaps greater presence in the State's concern or lesser presence? Or not much has been made for them? Or perhaps a program or political intent has been focused in women and children?

P: Well, yes there has been a targeting of social programs towards women, i.e., women are par excellence, in almost all social programs, the focus of attention and this for several reasons. One is the issue that is considered women to have an altruistic behavior regarding the whole household and also by some sexual division of labor, in the sense that it is women who are primarily concerned with children and if one wants to tackle the problem of child morbidity and malnutrition know that this is an effect that is achieved not only by improving the conditions of children, but also is achieved by improving the conditions of mothers. That mother-child relationship is very important, not only in the material, but also for example in the acquisition of knowledge of skills in handling all factors that affect a child's health.

I: And would you consider that investment or spending that could make the public sector, whether central, regional or local government, has had a significant role in the health dimension? For example you mentioned the issue of social programs. Or is still insufficient and not well focused, maybe very little attacked?

P: Let's say the topic is that social programs should not be seen disconnected from the public sector investment, in this case the Ministry of Health, Ministry of Education. That's the fault of many social programs that have not been articulated with sectoral health policies in particular. Although many of them do have a significant impact, they will have much more as health in Peru is provided on one side by the private

sector which accesses only a small part of the population, employees essentially and those who have private insurance; while the rest of the working population, but without economic means to access these private systems, access to a health insurance system in which the waiting time is much longer and do not provide the quality of service. Finally this is for employees and not all employees are declared by their employers in their companies. This high rate of informality makes the population has been unprotected. But since 2004 there has been a significant effort to create the SIS, the Integral Health System, where health coverage for the poor in particular was proposed, and that coverage has increased significantly to the point that, according to statistics of the MINSA¹⁹, currently about 70% of the population is covered by such insurance; however, be covered by insurance does not mean having access to health services and even less to quality health service. And here public investment, which was first directed to the construction of health posts, has not considered the construction of regional health poles and makes the most of patients with chronic or more serious illnesses have to come to Lima.

I: So health is still centralized. Basically the attention of most difficult problems to deal with, this complex layer of health, remains in the capital.

P: Yes. It is in the capital and especially in specialized centers. When one sees, for example, the origin of hospital patients, usually the place of residence that many claim is Lima despite residing in provinces. The other point has to do with the vulnerable population, I think it's an important point also in terms of health coverage. A health shock, which can be important, can also cause a drop in poverty in households that are considered middle class but who do not have health coverage that will address these important expenses. For many of these households mean dissaving, loss of assets and situations that cause, in some ways, poverty traps because they are situations which later is very difficult to recover.

I: And this difference between the regions of the country, if we exclude Lima, is there any differences between the level of quality of care in the country's regions, the level of care? Obviating Lima right? Among the provinces.

P: Sure. Here again that inequality between Lima and the rest of the country is played on a different scale. We have big cities like Arequipa and others, which have hospitals with relatively similar quality we have in Lima, but we have many other towns where such infrastructure does not exist practically. Then there also those disparities accentuate the inequalities that we already have, such as economic inequalities, and they are inequalities the Estate could intervene at various levels, both the central, regional or district governments, and it would contribute to reducing these gaps.

I: And just talking about local and district governments, how could it be an intervention in their jurisdictions if they had this concern in health, which seems absent so far?

P: Well the issue is that the state is present in small measure in many regions of the country. That is, contrary to what many argue that we have too much state, too much red tape and bureaucracy actually Peru lacks much state in the provision of public services to improve the living conditions of the population in a long-term and improve therefore, not only their welfare but also its production capacity. Local authorities actually have little capacity to manage health investment projects that must also be coordinated projects. This is not to put a hospital in each district, but comes to planning based on population density regions and the pathologies that exist to have general hospitals, more specific hospitals to more present pathologies in certain areas than in other. So I think that is not an issue that should be delegated within the framework of a policy of decentralization to local authorities, but rather has to be part of the action of the MINSA to coordinate and streamline large-scale investments that are beneficial to entire regions and not just a small town, providing

¹⁹ Ministry of Health

health posts that are simply indispensable for minor health problems and which forces many people, when they have the means, to have to travel to Lima for treatment.

I: So it would be like a two-stage strategy, where the Ministry of Health coordinates a national and regional plan of major investment in infrastructure, heavy investment in hospitals and specialized centers, but can then delegate certain kinds of roles to regional governments, provincial governments and local governments? What kinds of tasks could be delegated, for example, to sub-national governments?

P: I think for starters we should not see the whole health problem as a problem purely of infrastructure. That is, I think, an engineering approach to the problem and has to do in the same way that has attacked the issue of education. I think here's a parallel that can be interesting and which can draw positive lessons, i.e., we know that there has been a significant improvement in the last three years in yields of testing knowledge and these improvements have been achieved both by improvements in infrastructure but also for improvements in staff, in this case teachers, through policies promoting wage increases that actually try to improve the practice of the profession and especially the incentives to go to provinces. Many of the doctors, not that there is an insufficient number of doctors, but it is poorly distributed in the territory. All are concentrated where the purchasing power is higher and very few go to the places where precisely the population is less served. So here the State has to improve the practice of health posts in these localities, for which they must also provide them with minimal infrastructure.

I: Speaking of royalties from resource extraction, i.e. the canon, do you consider that the canon could have some kind of impact on the health situation of the population? Is there any mechanism by which canon royalties, spread across the three levels of government, may impact the population and can be used for them?

P: Well there are two types of impact. Direct impacts through the use of canon, which is exclusively for infrastructure and not for anything else, which in turn poses problems because it means that the provincial, regional or district governments, could build a hospital but not have the means to make it work. So here are a serious problem in the conception of the distribution of the canon, which is not give confidence to local authorities, perhaps judging the degree of corruption they have, to not give management a current expenditure that is necessary for the operation of infrastructure. That's why most of the investment from canon is for infrastructure and does not require staff to operate.

I: They have to go through the SNIP²⁰ only.

P: And also go through the SNIP. That is, first there are built roads, public squares, etc. that once built do not require a personal or a current expense to work. And on the other side is the exercise too punctilious of the SNIP, where they demand an amount of impact assessments and other administrative requirements for the project to be viable or not. So here, on the one hand to prevent the brake the SNIP gives, it is that the state could intervene directly in a planned manner both supplies and infrastructure as well as through the increase of salaries and make it more attractive, perhaps differentially, the remuneration of doctors who go to places where they are deprived of these services.

I: And canon resources could be used for that if the ban of only infrastructure was lifted.

P: With the theme of canon I think we should also be careful because not all districts have mines, not all provinces have districts with mines and not all departments have places with mines. That is, we should not

²⁰ An administrative system of the State which through a set of principles, methods, procedures and technical standards certifies the quality of public investment projects.

think that that should be the only way to close the gap because it definitely won't close in places where there are no mines. So, I think, that may be one of the resources but, again, only a regulatory state can distribute equitably without accentuating spatial disparities that are linked to the fact that some departments were lucky or not to have a mine and therefore receive canon.

I: And, so far, do you think that these royalties from natural resources to sub-national governments have somehow improved health where it is present? Or so far it has not been observed any investment that is the product of canon and that has improved health issues.

P: Let's say that studies on the impact of the canon are still incipient. Most of them focus on other dimensions, in particular educational dimensions and general living conditions. There does not yet exist, to my knowledge, an impact assessment on the health issue. One can easily imagine that this impact acts directly, not only through other mechanisms that have to do with improvements in connectivity, for example, I can now go much faster to the provincial capital where there is a hospital when it was previously almost impossible to do. So it is an improvement of road infrastructure that has an impact on better access to health offer. And obviously also indirect effects through general improvements in living conditions by decreasing the morbidity of people. But what we have to observe also in Peru is that we are facing a process of structural transformation where the prevalence of chronic diseases begins to have far greater importance than it had before.

I: The demographic bonus ends.

P: Is not the demographic bonus, but overall the population by improving their living conditions...

I: They start to suffer other diseases.

P: They now suffer chronic diseases that put us on the same footing with other advanced countries. Most of the deaths are due to chronic diseases, cancer...

I: And no longer transmittable.

P: And they are no longer transmittable or infectious that are specific to a country where sanitary conditions are very low.

I: Thank you

P: You are welcome.

Audio length: 00:15:20

Interviewed: Roxana (P)

I: Ok, first the data. Your name is?

P: Roxana Barrantes

I: And what is your position?

P: Where?

I: In general.

P: I don't have one position, I have many.

I: What are they?

P: I am a principal teacher here at the PUCP and I am principal investigator of the IEP.

I: And what topics do you normally see in your jobs?

P: Regulation topics. Infrastructure regulation, telecommunications regulation, cost and appropriation of information and communication technologies.

I: These are already questions of the interview itself. Given the current context, mid- 2016 prior to a change of government, how do you see the general health situation in the country? Given a broader view and considering what happened before, what has been done in this government.

P: Although I want to think that a lot has been done and I had the opportunity to meet with the minister once and she told me everything that was done, my great approach to health issues comes as a user. So as a user what I see is that EsSalud²¹ has not improved. Like a set of ... well it takes a long time to be in the attention queue. If you're willing to wait you do it, but with health issues it generates much insecurity to people so it is very difficult to wait. That on the one hand. On the other hand, is the issue that as a user of EPS²² health services, what I've seen from the position of economy, is an increase in the market power of the insurance companies. So one realizes that strange things are happening. The doctors are paid very little, doctors no longer have an incentive to attend.

I: In the private insurance?

P: In the EPS. That's supposed to cover the single layer for all those who still contribute. You take the decision to attend there, I understand that. So I'm not sure, I do not want to be unfair to the efforts that have been made to expand the coverage of SIS for school students, to expand the coverage of the SIS for taxpayers via MyPE²³ in the simplified regime of income tax, etc. But the truth is I feel that it is still not a situation that makes people feel calm and safe.

I: And do you think there has been any substantial change in recent years? For better or worse. Something that has been left undone, something that has been implemented.

P: Well, the SIS coverage has expanded a lot, the resources already allocated to the health sector have increased and that is super positive. Then it will be very complicated for a government to come and stop everything. As is already stuck in the inertia of the budget process it will be very complicated. Everything cannot be done at once. One of the things that has been done, for example, is an institutional reform.

I: Of the health sector.

P: The health sector. Where you used to have the minister and vice minister. Now with the logic that someone operates and other evaluates and plans, you already have a pair of vice ministries. One who is responsible for operations and one which is responsible for evaluating, planning, etc. So that reform is important.

²¹ Decentralized public body which aims to cover the insured and their dependents through the granting of benefits accruing to the tax regime of the Social Security Health insurance and other human hazards.

²² Companies that provide social security services in private health workers who are affiliated to them, complementing EsSalud coverage.

²³ Economic unit, whether natural or legal, whatever its form of organization, which aims to develop the extraction, processing, production, marketing of goods or services.

I: In SuSalud²⁴

P: No. SuSalud is a disaster. I'm not talking about SuSalud, I'm talking about this institute that directs Oscar Ugarte that has to do with the hospital management, etc. Something that has not changed and that could change, and that is really difficult, is to change this culture of doctors who believe that the health sector is theirs.

I: And that the minister has to be a doctor too.

P: And the minister has to be a doctor and it really seems to me a great stupidity on the part of the doctors themselves. Really a person who has studied what they have studied and believes that the best use of their time is to be a manager, really they should not have study that much, they should have gone to administration school from the beginning and I think we would all be better. That is a very long-term change and it will be difficult to do, but the more people outside the medical profession enter into the discussions it will be better. That is not a...

I: A club

P: It is not a patrimony of the doctors.

I: And talking specifically about women, do you think there is any particular regarding their health situation in the country? That is, are they better served, poorly served? Is there more concern for them or they simply do not enter the health agenda as a priority?

P: Look, I do not want to be unfair because there are a lot of things I do not know, but the truth is that I do not like male doctors to treat me. They do not have the foggiest idea. They do not have the foggiest awareness of the kinds of problems that women can have, it does not pass by their brain. It is when you find a female doctor who finally asks you a question that may be relevant and they guess. So I think that in the training of doctors there is little awareness that we are two different genres with different organs and therefore health care deserves some kind of, you know, at least being aware that there may be some consideration that has nothing to do with the functioning of the organ itself. Now we add all the policies that could not be implemented because we have a caveman congress. At this time in Peru, apart from the absence of reasonable reproductive policies, if you have money you buy the morning-after pill but if you do not have money ... and they are now discussing a penal code that the honestly I cannot believe. Until I see the penal code I will not believe it. They are arguing that if there is a spontaneous abortion either way you will...

I: Community work

P: Community work. Really I do not understand. I cannot understand. So if you ask me I think we're worse.

I: Regarding women

P: Yes, worse.

I: And do you consider that investment or expenditure made by the public sector, whether central, regional or local government, has had a significant role in health? Or almost everything is basically due to the division that makes the Minsa?

P: I have no data to answer that question. I don't know.

²⁴ Institution charged with protecting health rights in Peru, for which directs its actions to empower and place the citizen at the center of the national health system, no matter where they attend or insurance status.

I: And do you think that there is, in this sense of different levels, some contrast in the quality of care in regions of the country?

P: Definitely. God save me from getting sick outside Lima. Really if I suffer here with doctors, over there I do not know, I have no idea, I do not want to. I'm not sure we have... the incentive system right now makes the best doctors to stay in Lima. I would not want to have an emergency in a rural area for example. Here I am not questioning the commitment, nothing. What I'm commenting is that it seems to be no incentive to improve quality seriously, which makes the health professionals or health technicians or who has to give the provision of health, to consider the other as a human being.

I: And specifically talking about the case of local government, do you think that they care about health particularly in their jurisdictions? Have you seen any case where there is some concern, for example, in a municipality for the health of the residents?

P: Well unfortunately I cannot generalize here, but I've seen that "San Isidro" and "Miraflores" have health care centers.

I: From the municipality.

P: Municipal. I do not know if in districts like "Villa Maria del Triunfo" and "Villa el Salvador" they have that kind of service. I do not know what's happening.

I: On local governments and health you said that you saw in Miraflores, San Isidro.

P: Yes. I do not know what happens in other districts.

I: And do you think that within the priorities of local governments could be investing in health or is it something that should be leave to the Minsa so is more centralized?

P: Is the regional government who should do it. MINSA is the regulatory body, should not be operating. The operation is made by the regional governments and they are transferred the money as far as I understand. I do not think municipalities should be in that. For starters they would have to do solid waste disposal. Who is going to do that? No one. They would have to make sanitation system. Who will do that? The ministry could, but it won't do it. They won't. Treatment plants, I don't think they should be hiring nurses. It's clear to me why Miraflores and San Isidro do it. They must have some kind of surplus, but if there were no surpluses, between providing drinking water and giving health services, I think they should dedicate to provide health services. Also I think the issue of how to attend the population of a territory has to be seeing territorially, so if you lower the level you could be repeating benefits that may be higher scales. It is the story of "I want a municipality in my province". For what? The same. I want a type 4 hospital in my province. If you are from Echarate you can build it, but it makes no sense.

I: You don't have population.

P: Now, you could attract the best doctors.

I: With municipal incentives.

P: I don't know. I don't know. Would a doctor of the clinic San Felipe move to Echarate? I don't know.

I: And speaking about the royalties from resource extraction, i.e. the canon, in all types, do you consider somehow that fee revenue could have an impact on the health situation of the population? Do you think there is any direct or indirect mechanism where revenue canon arriving at central, regional and municipal governments could be devoted to the health sector?

P: What is the canon of the central government?

I: The canon is distributed among regions. Sorry, not central. Regions, provinces and localities. And a 5 % to universities.

P: Ok. What companies pay is not canon, is it?

I: No

P: They pay income tax. No. They pay income tax. That income tax has a percentage that is called canon and that's what is distributed. Ok? Companies do not pay canon. It is called canon of radio electric spectrum use, but the idea is different. I have that explained somewhere. Companies do not pay canon. They don't, they pay income taxes and what the government has done is to establish a direct mechanism of redistribution. Nothing else. What is called canon in Peru could be used to improve the health situation, is that the question?

I: Yes

P: Yeah

I: Or if you see that it has been implemented that way.

P: No. No one has thought of that. Supposedly the canon only can be used for capital goods. Infrastructure. And makes sense within what is the optimal exploitation of natural resources, but within the municipal powers. As long as health is not within the municipal powers it is not going to dedicate to build a health post or financing the training of doctors. But the situation could affect health through improving sanitation and drinking water supplies and that is a municipal responsibility.

I: And for what it is allowed to invest canon. Because it is infrastructure.

P: Yes of course.

I: Ok, that's all.

Annex I: Coordination with Other Complementing Projects

As part of our activities in Peru we had several in-depth meetings with the Research and Learning coordinator and Management Committee member of the Project “Women Entrepreneurs Leading Development” (WELD), a USAID initiative on Women’s Leadership for Small and Medium Enterprises in Peru (WLSME). The aim of this USAID project is to provide women with training on marketing and financial skills, leadership, and entrepreneurship with the expectation that they will become empowered at home and at work. In particular, USAID/E3’s Office of Microenterprise and Private Sector Promotion (MPEP) requested evaluation support to complete work on three impact evaluations for WLSME projects, one of which, was done in Peru²⁵.

The aim of our coordination is to find out whether there are any complementarities between both projects and if so, what can be done together in order to optimize any policy impact in the future. In fact, while one may claim that there are direct connections between empowerment and health issues at the household level, it is unclear whether these issues have been addressed by the Peru WLSME project. In addition, our research project aims at obtaining gender specific performance measures on health at the household level, which may be linked to public expenditure on this sector, but it is unclear the extent to which the role of public expenditures may be present in the Peru WLSME project. In the context above, we held formal and informal meetings and conversations with the lead principal investigator of the Peru WLSME project and his team in Peru in order to assess key points in which mutual collaboration or support may be beneficial for both research efforts²⁶. Thus, the aim was to hold detailed conversations and analysis on how to develop clear intersections between households that benefit from WLSME and households where measurable gender-specific measures resulting from public sector expenditures in health can be linked.

a. USAID WLSME Project in Peru.

The aim of the WLSME project in Peru was to provide women with training on marketing and financial skills, leadership, and entrepreneurship with the expectation that they will become

²⁵ The other two projects are in Kyrgyzstan and India. The lead principal investigator of this project, Dr. Chong, is also the lead principal investigator of the impact evaluation of the corresponding interventions in these two countries.

²⁶ Meetings in Peru were held while the principal investigator was in the country, during the second and third week of March and the first two weeks of April 2016. Additional follow up meetings are scheduled for the second week of June in Lima.

empowered at home and at work. It contained several components related to formal training on business skills to women, which were evaluated using (i) a randomized controlled trial along with (ii) qualitative approaches that included interviews and focus groups with treated parties. The objective of the randomized controlled trial was to compare participants from a control group, in relation to women participants assigned to receive a Business Management Training component, which included basic accounting and financial practices. The idea was that the business program component would have higher mean values on the following, post-intervention outcomes: entrepreneurial leadership, business growth, business knowledge/practices, and social/business networks. In addition, a secondary objective was to compare the Business Management Training participants to a Market Linkages component, which included marketing strategies on how to position the women's small firm.

In particular, the business management training covered different topics such as negotiating skills, business planning, leadership and human resource management. The training was demand driven and market oriented, which meant that women had a choice to some extent of what topics and when to attend based on their interest. There was a required minimum of 24 hours of business training (4 days of 6-hour training sessions) from all women in the treatment group plus any other topic among the remaining training modules. Women could continue with more training, setting a maximum of 72 hours per participant. In addition, the market linkages component included stakeholder meetings on marketing strategies, workshops on value chains and sub-sectors (8 annually), semi-annual value chain stakeholder meeting, web page resources, and annual business plan competition.

Eligible women were targeted and actively recruited and applications were accepted and reviewed on a rolling basis. Applicants were selected to be eligible for participation in the program based on the following criteria: the woman had to be at least 18 years of age, she had to show interest and motivation in participating in the Peru WLSME, the women had to be entrepreneur, leader, or manager in a private business, and the business had to have at least one non-family member employee. Initially, recruiting was a challenge so there was a long lag time between the time women expressed interest and the time when they were confirmed enrollment. Thus, initial drop-out rates were higher. Take-up rate ended up at 60-65%, attrition during the program is low, once women make the effort to attend they stayed in the program.

Overall, the outcome measures of the WLSME Peru project included the following variables: (i)

entrepreneurial leadership, which was measured using a scale based on a set of ten questions related to this issue; (ii) business growth, which included measures of profits, sales, number of employees, formality, mark-up and number of customers; (iii) business knowledge and practices, which included measures on inventory management, costing and record keeping, financial planning, and business decision-making, and (iv) social networks, which included measures regarding participants' involvement in professional networks, such as the number of other business owners with whom the woman discusses business matters, as well as commercial networks.

Areas of Possible Overlap

The evaluation of WLSME Peru, currently ongoing, is being led by Dr. Martin Valdivia, a senior researcher at Grupo de Análisis para el Desarrollo (GRADE) a premier Peruvian Think Tank. The evaluations incorporate a randomized controlled trial and additional mixed methods, including in-depth interviews and focus groups and are aimed at studying the impact of the project interventions in addressing specific constraints to the development of women's leadership in small firms. The project will cover follow-up data collection rounds at multiple intervals, possibly at twelve and eighteen months.

Technical Concerns

The meetings with Dr. Valdivia covered a broad array of topics some related to the project itself, and others to the possible areas of overlap and collaboration in the future. In relation to the WLSME Peru project the following comments were raised: (i) issues related with selection bias and small sample size, so that inferences made across the sub-groups may be weak; in addition, sample sizes seem relatively small to be able to detect any impact across treatment groups; (ii) potentially diffused interventions, as women were required to complete a minimum of 24 training hours where they decided when to attend and which topics to learn. The inconsistent interventions may diffuse impact effects; (iii) possible spillovers into control group as the women randomized into treatment and control groups come from the same site/region. Therefore, it would be easy for women in the treatment group to share the information learned with women in the control group. There was no way to prevent women from sharing information, but a way of reducing the problem was to add questions to the end line survey to control for this issue during the analysis.

Possible Areas of Collaboration

Along with Dr. Valdivia it was agreed that on the surface there was little overlap between the WLSME Peru project and our Women's Health and Expenditure Project. The project carried out by Valdivia and GRADE focuses on the private sector and on ways to improve private return using methods that can help women obtain higher market returns. The DRS women's health and expenditure project focuses more on public policy and how public expenditures may impact women's health issues. However, there is an underlying potential overlap in the issue of women's empowerment. GRADE's project seeks to empower women through business and related training. DRS' project complements the former, seeking to optimize women's health outcomes via better public expenditure, which may also result in increased women's empowerment.

In order to find areas of coincidence with the WLSME USAID program, GRADE allowed us to analyze raw data from their project. Similarly we allowed GRADE to study the raw data from our project. We concluded that these data did not contain useful information that may lead us to collaboration and for this to happen we would need additional data sources. Given the above, it was agreed that DRS and GRADE would pursue a research agenda that would include:

- Analysis of administrative and household survey data already available from the National Institute of Statistics in order to uncover a subsample of households with the following characteristics: (i) household with a secondary entrepreneurial activity, with at least a female member that works there; (ii) households that receive any subsidy from the Peruvian government, in particular, the national Conditional Cash Transfer Program, Juntos; (iii) households that are located in communities with high public expenditures, preferably those that receive substantial funds from the Mining Canon. By doing this, the expectation is to identify a subset of households with entrepreneurial women, who live in households that receive substantial funds from the public sector. We may be able to test for correlations between said public expenditures (such as the conditional cash transfer program) and the basic performance of the small household-based small enterprise. Further analysis may allow to test a causal relation between these variables, as it may be possible to employ a difference-in-differences approach, similar to what DRS is doing in the current consultancy on public expenditures and women's health.
- A weakness of this approach is that at this point it is unclear whether DRS and GRADE would be able to study women's health related issues in sufficient depth. Whereas the National

Household Surveys do have a survey module related to health issues in the household, which would allow us to match public expenditures at the municipal level with entrepreneurship (GRADE's requirement) and women's health issues, the depth of questions in this module may not be adequate enough, not only because of the type of questions, but also because of lack of data. A first cursory analysis of the data shows lots of "missing values" in some years.

- Both teams agreed to study related National Surveys, and in particular one on health issues, which is also administered by the National Institute of Statistics and analyze whether there are possible data that may serve our purposes.
- Both teams agreed to further explore financing in order to collect primary data with useful characteristics on public expenditures, women's entrepreneurship and health-related issues. We discussed possible sources of financing and will further study this issue in the future.
- Finally, both teams agreed to keep an 'open door' policy in order to continue discussions for possible collaboration and extensions between DRS Women's Health Project and GRADE's WLSME USAID Peru project.

b. Research Dissemination Activities.

A revised draft of the research paper originally produced and delivered to Deloitte on April 3rd – Milestone 2 (and the later revised version sent on June 3rd), was presented at several academic and non-academic venues both in Peru, Bolivia, and the United States as follows.

Activities Accomplished

- Informal conversations and academic exchanges with professors from Georgia State University (Atlanta, Georgia; May 15 – June 6)
- Presentation of partial results to participants of CAINCO, the most important non-academic national conference in Bolivia (La Paz, Bolivia; June 7)
- Presentation and discussion of results to a group of researchers at Grupo Análisis para el Desarrollo (GRADE), a premier think-tank based (Lima, Peru; June 14 and June 15)
- Informal presentation of draft and results to a group of professors and students at Universidad Católica, a top domestic university (Lima, Peru; June 16)
- Informal presentation of draft and results to a group of researchers from Centro de Investigación de la Universidad del Pacífico, a top domestic university (Lima, Peru; June 17)

Future Activities

- We expect that a further revised draft will be presented at the Meetings of the Peruvian Economic Meetings, which will be held in Lima on August 6th, 2106
- We expect to present key results to Peruvian officials of the newly elected government sometime after July 28th, once the new cabinet is sworn in. We aim to make presentations to officials from the Ministry of Social Inclusion and Development, the Ministry of Women, and the Ministry of Finance.
- We may consider disseminating a “lay” version of our findings with key results of the paper to both blogs (Vox) and the general media.
- We are planning a meeting with the USAID / Peru office, to present main results and discuss future work. The meeting is expected for mid July 2016.
- It is expected that a fully revised draft will be sent for possible academic publication in a peer-reviewed journal sometime by the end of the year or early in 2017.

Annex J: Photographic Report

Focus Group Meetings

Canta



Obrajillo



Pariamarca



Mancos



Marcará



Sample of Healthcare Centers and Hospitals located in areas of study.

Hospital Sergio Bernales “Collique” – Comas



Health Center – Canta



Health Post – Pariamarca



Solidaridad Hospital “La Merced” – Comas



Victor Ramos Guardia Hospital – Huaraz



San Pablo Clinic – Huaraz



San Juan de Dios Hospital – Caraz



Hospital Eleazar Guzmán – Chimbote

