



Living Wage Report

Urban and Rural Pakistan

Sialkot, North Eastern Punjab

With Context Provided in the Sports Ball Manufacturing Industry

December 2015

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Photo Courtesy of Andrew Jenkin, Supporters Direct Scotland

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Asad Sayeed and Kabeer Dawani, Collective for Social Science Research, Karachi

FOREWORD

This report on living wages for rural and urban Sialkot Pakistan by Asad Sayeed and Kabeer Dawani provides valuable information for an important Pakistani manufacturing center. It also provides insights on how to estimate living wages. It is especially relevant for the soccer ball (football) industry and sports ball industry in general, because Sialkot and footballs are almost synonymous as 70% of all hand stitched footballs in the world are made in Sialkot. While the sports ball industry in Sialkot has been subject in the past to considerable attention, study and action regarding the use of child labor - and the industry has responded to this challenge - much less attention has been paid to how well workers in the sports ball industry are paid and whether they receive a decent – aka living wage.

Asad Sayeed and Kabeer Dawani investigate living costs, living wages, and prevailing wages in the Sialkot area and in the sports ball industry in a holistic way. This led them to take on the added task of estimating two living wages for Sialkot - a rural living wage as well as an urban living wage. They felt that two living wages were necessary for Sialkot because of the structure of the industry in Sialkot - with hand stitched sports balls made in rural areas on a piece rate basis in informal settings and machine made sports balls made in urban factories. Estimating separate rural and urban living wages for the same general area is an important step forward for our living wage methodology.

While the living wage for rural areas near Sialkot is lower than the living wage for urban Sialkot as expected, the relatively small size of this difference (14%) was surprising. Understanding the sources of this difference and why it was not greater is quite informative. Almost all of this difference was due to lower housing costs in rural Sialkot (that were around one-half of those in urban Sialkot). In contrast, food costs and non-food non-housing (NFNH) costs as well as demographic factors of typical family size and number of workers per family were reasonably similar for rural and urban Sialkot. Food costs were similar, because the authors used almost identical model diets for rural and urban areas to assure similar nutrition for both areas as a matter of fairness, and the slightly lower rural food prices they found in their fieldwork were counterbalanced by a bigger family size in rural areas. The fact that rural food prices were only slightly lower than urban food prices is traceable to the fact that Sialkot is not that large a city (slightly more than 1 million) and that the rural areas where sports balls are stitched are relatively close to the city. Non-food and non-housing costs were similar in rural and urban Sialkot, because Sialkot City has a low NFNH to Food cost ratio for a city according to available household survey data, as Sialkot is a manageable size city with for example relatively low transport costs for households. Finally, the somewhat larger family size typical of rural areas

compared to urban areas is counterbalanced by the somewhat higher labor force participation rate for rural women compared to urban women.

Asad Sayeed and Kabeer Dawani provide compelling evidence that the sports ball industry has a long way to go before workers are paid a living wage. Urban prevailing wages would need to be increased by around 50%. Rural prevailing wages would need to be increased by more than 100%. It is important to note that these large differences are not due to an exaggerated living wage, because the authors used conservative assumptions to estimate their living wages. It is disconcerting that the urban living wage was found to be more than twice the government's new poverty line when converted into a wage and more than 50% greater than the minimum wage. The situation is even worse in rural areas where it is possible for hand stitchers of sports balls to earn less than the minimum wage, because they work in informal settings and are paid by piece.

It is clear – as pointed out by Asad Sayeed and Kabeer Dawani – that the entire value chain needs to get involved in finding ways forward toward significantly improving wages in the sports ball industry in Pakistan, because manufacturing of sports balls in Sialkot is a competitive industry. It is hoped that this report will help the sports ball industry, which has responded in the past to criticism of the use of child labor, to bring together key industry stakeholders and certifying organizations such as Fairtrade to now tackle low wages especially for hand stitched balls that are often used by professional sports teams and athletes.

Richard Anker and Martha Anker

January 2017

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Living Wage Estimates

Sialkot, North Eastern Punjab, Pakistan

Rural and Urban

Context Provided in the Sports ball Sector

INTRODUCTION

1. BACKGROUND

This report estimates a living wage for the Sialkot region in Punjab, Pakistan for December 2015 with a focus on workers in the sports ball production industry. Sialkot is one of the biggest centers of manufacturing in Pakistan, and in particular is dominated by the sports ball manufacturing industry. The report uses the methodology developed by Richard and Martha Anker to estimate the living wage (Anker and Anker, 2017).

In order to estimate the living wage, fieldwork was conducted in urban Sialkot as well as its adjoining rural areas. This is because the process of producing sports balls involves large factories which are situated in urban Sialkot, as well as sports ball stitching centers which are primarily located in rural Sialkot. To include workers in both aspects of sports ball production, we estimated separate living wages for urban and rural areas. The primary data collected from our fieldwork, complemented by secondary data from national data sets, forms the basis of the living wage estimate in this report.

This study was initiated and funded by Fairtrade International, and conducted by the Global Living Wage Coalition (GLWC)¹. The overall work of the Global Living Wage Coalition, including activities leading to this benchmark, is further supported by the Ministry of Foreign Affairs of the Netherlands, Directorate-General for International Cooperation (DGIS).

The Global Living Wage Coalition comes together with the shared mission to see continuous improvements in workers' wages, in the farms, factories and supply chains participating in their respective certification systems and beyond, and with the long-term goal for workers to be paid

¹ The Global Living Wage Coalition brings together Fairtrade International, Forest Stewardship Council (FSC), Goodweave, Rainforest Alliance (RA), Social Accountability International (SAI), Sustainable Agriculture Network (SAN), and UTZ in partnership with the ISEAL Alliance and Richard Anker and Martha Anker

a living wage. Each living wage benchmark commissioned by the Coalition is made public to further this aim and to increase the opportunity for collaboration toward payment of a living wage.

The Global Living Wage Coalition aims to develop living wage benchmarks in many countries based on a single definition and methodology of calculation of living wage and as a critical step to enable industries and companies to move towards paying a living wage. The Coalition is working together with Richard Anker and Martha Anker, international specialists on living wages, to benchmark living wage levels using a new methodology they have developed to measure living wages.

In order to work together on living wage, it is important to share an understanding of what a living wage is. A recent ILO review revealed that there is a general consensus on the definition of living wage (Anker, 2011). Drawing on this report and in consultation with experts, the Global Living Wage Coalition has adopted a common definition for living wage (see section 4). The Global Living Wage Coalition sees the calculation and release of Living Wage benchmarks as the first step in a long-term process. The Coalition does not believe the benchmarks will or should supplant collective bargaining rights, but will serve as a replicable tool to support social dialogue between workers and employers. For many developing country producers, wages form an important part of the costs of production. As such, it is important to introduce wage requirements in the standards systems of Coalition members only in combination with dialogue and involvement of actors at all levels of the supply chain.

2. LIVING WAGE ESTIMATE

Our net living wage estimate for urban Sialkot is Rs.20,144 (\$193)² per month and the gross living wage estimate is Rs.20,224 (\$194).³ This is before accounting for any in-kind benefits that reduce the need for cash income. When workers receive transport as an in-kind benefit, our estimate of the cash gross living wage required is Rs.19,960 (\$191).

Our living wage estimates, net and gross, for rural Sialkot are the same at Rs.16,993 (\$163) per month. The workers in these areas do not have any payroll deductions or income taxes to pay, nor do they receive any common in-kind benefits, and so there is no consideration for that in our calculations.

² The exchange rate for Pakistan Rupees to US Dollar was Rs.104.3 on May 20th, 2016. This is the rate used throughout this report.

³ The difference between the net and gross living wages is mandatory deductions made by firms, such as for social security or income tax. For details see section 13.

In comparison to the prevailing wage in urban Sialkot's sports ball industry, the gross living wage is 45% higher than the wage currently prevalent there. The difference is greater in rural Sialkot, where the gross living wage we estimate is 110% higher than the prevailing wage in sports ball stitching centers. Thus, both our living wage estimates are significantly higher than the wages workers currently earn in this region (see Section 14 for details).

The process of estimating living wages included visits to sports ball producing factories in urban Sialkot, and to sports ball stitching centers in rural Sialkot; visits to workers houses in both areas; discussions with real estate agents; visits to markets and shops where workers shop in both areas; discussions with workers in factories and stitching centers; and using data from national surveys conducted in Pakistan.

3. CONTEXT

Sialkot District is in the northeast of the Punjab province in Pakistan. It comprises of four *tehsils* (or administrative subdivisions): Daska, Pasrur, Sambrial and Sialkot city. Sialkot city is the main urban center and the administrative capital of the district. According to the 1998 census – which is the most recent census in Pakistan – Sialkot District has a population of more than 2.7 million people. Of these, 1.25 million reside in Sialkot city.

Sialkot is one of Pakistan's primary hubs of manufacturing export quality goods. In the year 2014-15, Sialkot's exports were valued at \$2 billion (Malik, 2015). In particular, the city produces high quality sports goods, leather goods, surgical instruments, cutlery, and textile goods.

However, it is most renowned for producing sports balls that are used throughout the world, including for the largest global brands. More than a 100 firms produce these sports balls, which account for 40 percent of the global market share (Pinsker, 2014). In fact, within sports balls, Sialkot completely dominates the world market for hand-stitched sports balls with a share of 70% (CREB, 2015). Famously, the balls used at the most recent FIFA World Cup held in Brazil in 2014 were produced here as well.

There are two types of balls produced. One category is balls that are stitched on machines and the other is hand stitched balls. Machine stitched balls are all made in factories that are located in urban areas. Hand stitched balls, on the other hand, are sourced out to workers in rural areas. Because no capital equipment is required for hand stitched balls, employers tend to reduce their overhead costs by farming out production to workers in rural areas. The mechanism is to identify middlemen, who are provided with materials and taught specifications on which hand stitching is to be done. These middlemen then seek out workers in nearby

villages and provide them with work that is undertaken on a piece rate basis. There is thus little contact between the worker and the employer. The entire process is also informal, as in there is no formal employment contract or compliance with labour laws.⁴

4. INTRODUCTION TO LIVING WAGE

The idea of a living wage is that workers and their families should not live in poverty. Importantly, however, the idea goes beyond that and includes participation in social and cultural life for the family. Thus, “wages should be sufficient to ensure that workers and their families are able to afford a basic life style considered decent by society at its current level of development.” (Anker and Anker, 2014)

The concept for a living wage is not new or radical, and has been espoused by various eminent personalities as well as well-respected institutions and organizations for hundreds of years. For example, Adam Smith wrote in 1776⁵:

“No society can surely be flourishing and happy, of which the far greater part of the members are poor and miserable. It is but equity, besides, that they who feed, clothe and lodge the whole body of the people should have such a share of the produce of their own labour as to be themselves tolerably well fed, clothed and lodged. ... These necessaries and conveniences are: not only commodities which are indispensably necessary for the support of life, but whatever the custom of the country renders it indecent for creditable people, even of the lowest order, to be without.”

In fact, living wage is recognized as a need by the international community, and is included in the United Nation’s Universal Declaration on Human Rights as well as in the International Labor Organization’s Constitution.

The definition for a living wage agreed upon by the Global Living Wage Coalition members and used in this report, is as follows:

⁴ It is worth noting that for sports balls manufactured in rural areas, even when subcontracted, to become Fairtrade certified that there needs to be child care facilities for workers’ children (http://www.fairtrade.net/fileadmin/user_upload/content/2009/standards/documents/Sports_balls_HL_EN.pdf). To help accomplish this, factory owners who subcontract hand stitching work in rural areas often concentrate production in stitching centers. In this way, factory owners are better able to monitor production, improve working conditions, and provide child care for workers’ children.

⁵ Quote taken from Anker and Anker (2017).

“Remuneration received for a standard work week by a worker in a particular place sufficient to afford a decent standard of living for the worker and his or her family. Elements of a decent standard of living include food, water, housing, education, health care, transport, clothing, and other essential needs, including provision for unexpected events.”

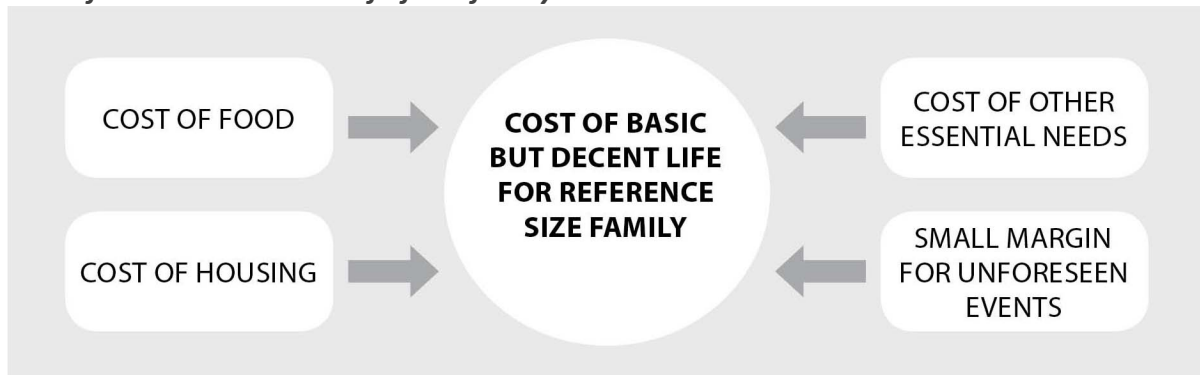
5. HOW THE LIVING WAGE WAS ESTIMATED

The chart below (Figure 1) indicates how the living wage was estimated for urban and rural Sialkot. We started by estimating the cost of a basic living standard for an average person that would be considered decent for Sialkot and meets minimum international standards. This was done by aggregating the costs for a low-cost nutritious diet, basic but acceptable housing, and all other needs at a decent level (first three boxes). These were done separately for urban and rural Sialkot. The ‘other essential expenses’ are referred to as Non-Food and Non-housing (NFNH) costs in the rest of this report. A small margin above this total cost for a basic but decent quality of life for the average person was added for emergencies and sustainability. This is included in case of any shocks and so workers can avoid getting into a downward debt cycle.

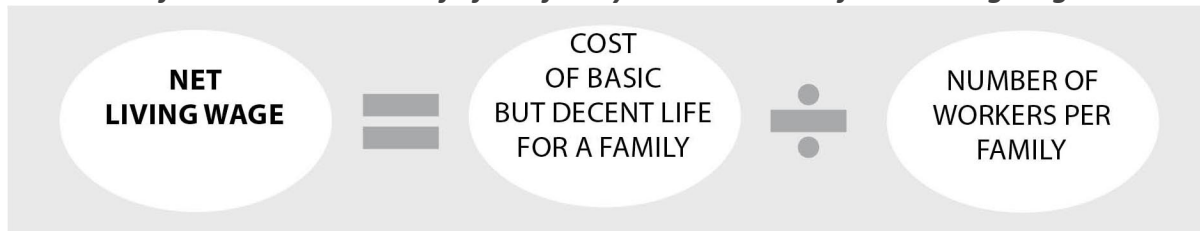
Since living wage is a family concept, the unit of analysis chosen was a nuclear family. Therefore, the typical family size was determined. The individual cost for basic but decent living standard was then scaled up for this family size, and then divided over the typical number of full-time workers per couple (as more often than not, more than one person contributes to the family’s income) to arrive at the living wage for a worker for urban and rural Sialkot.

Figure 1: Calculation of a living wage

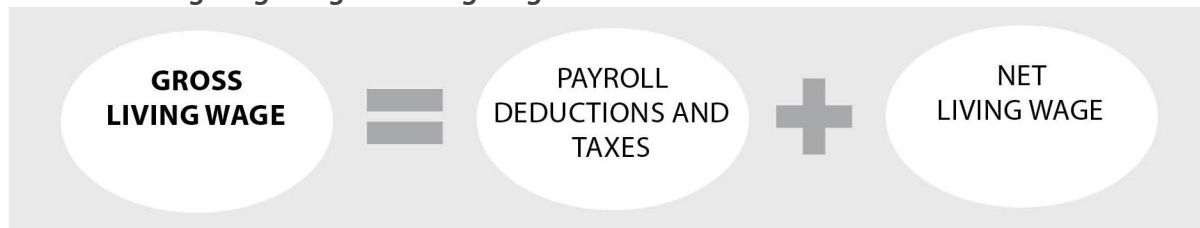
Cost of a basic but decent life for a family



From cost of a basic but decent life for a family to calculation of a net living wage



From net living wage to gross living wage



Source: Anker & Anker (2017).

SECTION 1

COST OF A BASIC BUT DECENT LIFE FOR A WORKER AND THEIR FAMILY

6. FOOD COSTS

This section describes how food costs were estimated for a typical family in both, urban and rural Sialkot. We will first identify the general principles used to develop the model diet, then estimate the model diet and then estimate the prices for food included in our diet to give us food costs.

6.1 General Principles Used to Develop Model Diet

We followed some general principles when developing a model diet, which are as follows:

- i. Nutritious – the model diet should be nutritious, i.e. have sufficient calories as well as meet international standards of proportions of macronutrients (proteins, carbohydrates and fats) and sufficient quantities of fruits and vegetables.
- ii. Relatively low cost – the items chosen to include in the model diet were kept as low cost as possible within the parameters of being nutritious and being of acceptable quality and palatability. The idea is that the diet should be healthy yet affordable given prevailing prices.
- iii. Consistent with local preferences – Our model diet reflects local food preferences, which were ascertained through interviews and focus group discussions with workers. Thus, for example, in a context where wheat is the main staple food, our model diet includes wheat as the main staple food and only includes rice once a week as that was consistent with local preferences.

6.2 Model Diet Used to Estimate Food Costs for Living Wage

To develop our model diet, we first determined the number of calories required for an average rural and urban family member in our reference family sizes. These required calories per person were determined using the Schofield equations (WHO/FAO, 2003) that are widely used to estimate calorie needs based on age, sex, average height, and activity level. We set the activity level for adults, including workers, and children as moderate.⁶ The equations were then used to

⁶ This is appropriate for both urban and rural because the nature of work for adults and the life that children lead is neither vigorous nor sedentary. Source used for average height is Average Height (2015).

calculate calories for adult males and females as well as children. The average number of calories was then determined for our reference family of 5 in urban and 5.5 in rural (see Section 11 for how we arrived at the family size). Thus, the number of calories per person in our model diet for urban Sialkot is 2187 and for rural Sialkot is 2161.⁷

To start development of our model diets, we chose specific types of foods to represent each food group. These were determined through interviews with the workers. The specific quantities of each food included in our model diet to start with were those indicated by data from the Household Integrated Economic Survey 2011-12 (HIES). These quantities were then adjusted so that the number of calories required for a typical family member as indicated above was met (e.g. if 2187 calories were required and the original diet based largely on HIES data contained 2000 calories, each food item in the model diet was multiplied by 2187/2000). A number of other adjustments and checks to these quantities followed to ensure: nutritional balance; distribution of food costs was reasonably similar compared to the expenditure distribution according to HIES; our model diet was consistent with local food preferences; and our model diet was low in cost for a nutritious diet by taking into consideration relative food prices in each location.

Our model diets for rural and urban Sialkot are shown in Tables 1a and 1b below. The proportions of calories coming from proteins, fats and carbohydrates meet the minimum WHO/FAO (2003) standards for a nutritious diet (see Figures 1a and 1b). It is important to note that the quantities refer to edible grams per day for each person in the family. This means that shells, skin, bones and seeds were excluded (but they were included in purchased grams so that food costs could be estimated). The data for the edible percentage of each food, as well as their nutritional content in terms of proteins, fats and carbohydrates were taken from the extensive United States Department of Agriculture database (USDA, 2015).

⁷ The reason why the required number of calories per person for our model diets is lower for rural areas than for urban areas is because our rural reference size family includes more children than our urban reference size family and children require fewer calories than adults on average.

Table 1a: Urban model diet

Food items	Edible grams	Purchased grams	Cost per kg	edible grams X cost per kilo/1,000	Comments (Diet is for average person in family of 5)
Wheat	342	342	39.8	13.6	Staple food across the region, and cheaper than rice.
Rice	25	25	71.9	1.8	Rice once a week as some meals are consumed with rice.
Potato	58	77	29.8	2.3	Potato. Least expensive root and tuber and consumed widely.
Legumes 1	15	15	120.0	1.8	Beans are consumed as a cheap source of proteins.
Legumes 2	30	30	128.8	3.9	Lentils (<i>daal channa</i>) are extremely popular in the local diet as a cheap source of proteins.
Milk	162	162	88.8	14.4	Fresh unpackaged milk. Pasteurized prepackaged milk more expensive. 1 cup for children; and 10 ml per cup of tea for adults.
Yoghurt	20	20	105.0	2.1	Often consumed with meals in small quantities.
Egg	15	17	119.3	2.1	2 eggs per week
Meat/poultry/fish	24	35	207.5	7.3	Broiler chicken
Vegetable 1	46	64	14.4	0.9	Spinach is a cheap and nutritious green leafy vegetable.
Vegetable 2	31	35	40.1	1.4	Tomato is used as a base

Food items	Edible grams	Purchased grams	Cost per kg	edible grams X cost per kilo/1,000	Comments (Diet is for average person in family of 5)
					vegetable in most meals.
Vegetable 3	41	46	38.6	1.8	Onion is used as a base vegetable in most meals.
Vegetable 4	46	54	17.2	0.9	Radish in the winter and Cabbage in the summer. Both are low cost vegetables.
Vegetable 5	46	54	22.0	1.2	Carrot in the winter and eggplant in the summer. Both are low cost vegetables.
Fruits	70	121	32.3	3.9	Bananas in the winter and watermelon in the summer. They are nutritious and cheap fruits.
Cooking oil	34	34	155.1	5.3	Packaged oil available from a general store.
Tea	3.6	3.6	796.0	2.9	Packaged tea (Tapal)
Sugar	36	36	60.5	2.2	Sugar is sold per kilo, usually in general stores.
Total				69.7	
Total with 18% miscellaneous costs				82.2	10% for variety 5% for minimal spoilage and waste 3% for condiments and spices

Table 1b: Rural model diet

Food items	Edible grams	Purchased grams	Cost per kg	edible grams X cost per kilo/1,000	Comments (Diet is for average person in family of 5.5)
Wheat	336	336	36.7	12.3	Staple food across the region, and cheaper than rice.
Rice	25	25	60.8	1.5	Rice once a week as some meals are consumed with rice.
Potato	52	69	27.8	1.9	Potato. Least expensive root and tuber and consumed widely.
Legumes 1	15	15	112.5	1.7	Beans are consumed as a cheap source of proteins.
Legumes 2	30	30	122.5	3.7	Lentils (<i>daal channa</i>) are extremely popular in the local diet as a cheap source of proteins.
Milk	170	170	85.6	14.6	Fresh unpackaged milk. Pasteurized prepackaged milk more expensive. 1 cup for children; and 10 ml per cup of tea for adults.
Yoghurt	20	20	100.0	2.0	Often consumed with meals in small quantities.
Egg	15	17	132.3	2.3	2 eggs per week
Meat/poultry/fish	24	36	224.8	8.0	Broiler Chicken
Vegetable 1	46	64	20.0	1.3	Spinach is a cheap and nutritious green leafy vegetable
Vegetable 2	31	35	52.4	1.8	Tomato is used as a base vegetable in most meals.

Food items	Edible grams	Purchased grams	Cost per kg	edible grams X cost per kilo/1,000	Comments (Diet is for average person in family of 5.5)
Vegetable 3	41	46	42.5	1.9	Onion is used as a base vegetable in most meals.
Vegetable 4	46	54	14.0	0.8	Radish in the winter and cabbage in the summer. Both are low cost vegetables.
Vegetable 5	46	54	26.0	1.4	Carrot in the winter and eggplant in the summer. Both are low cost vegetables.
Fruit 1	70	121	33.9	4.1	Bananas in the winter and watermelon in the summer. They are nutritious and cheap fruits.
Cooking oil	34	34	134.5	4.6	Packaged oil available from a general store.
Tea	3.5	3.5	769.6	2.7	Packaged tea (Tapal)
Sugar	34.5	34.5	60.5	2.1	Sugar is sold per kilo, usually in general stores.
Total				68.6	
Total with 18% miscellaneous costs				81.0	10% for variety 5% for minimal spoilage and waste 3% for condiments and spices

Some features of our model diet worth noting are:

- Wheat is central to our diets and to local consumption. It is cheaper than rice and accounts for almost 18% of the cost in the rural diet and 20% in the urban diet.
- A considerable part of the animal protein in our diets comes from chicken. Workers overwhelmingly preferred this to other animal-based proteins. It is also less expensive than other foods such as beef and lamb. However, the consumption of chicken was infrequent due to its relatively higher cost. Our diet includes two chicken meals a week, which we think is decent and necessary to meet protein requirements.

- A considerable amount of pulses and beans (45g) are included in our diets because they are a relatively inexpensive protein and they were frequently consumed.
- For vegetables we include radish and carrots in the winter and cabbage and eggplant in the summer. Spinach is included as a green leafy vegetable. These are relatively cheaper and popularly consumed, while also being nutritious.
- In addition to these vegetables, we also include onions and tomatoes because these form the base for almost all meals cooked in Pakistan.
- Banana (winter) and watermelon (summer) are included to represent fruits as these are inexpensive and widely consumed fruits.
- Quantity of milk is 1 cup per day for children and 10 ml per cup of tea for adults and children.
- Tea is widely consumed in Pakistan; therefore, we include 3 cups of tea for adults per day and 1 cup of tea for children per day⁸.
- Our urban and rural model diets are almost the same. We felt that for decency and fairness that urban and rural people should have similar nutrition. The only difference in our urban and rural model diets is that there are slightly different quantities of wheat, potatoes, dairy, and tea in our rural model diet because our rural reference family size is slightly larger with more children than our urban reference size family.

To the total cost of our model diet, we added an additional 18% as miscellaneous costs. This includes 10% for variety to account for occasionally eating more expensive fruits and vegetables, and 5% to account for wastage and spoilage. Both these are conservative estimates. We also add 3% for salt, spices and condiments, which corresponds to the percentage for these that is found in the household expenditure data from the HIES 2011-12.

The final diet meets the requirements set out by WHO/FAO for the distribution of macronutrients. The standards specified are that proteins, fats and carbohydrates constitute, respectively, greater than 10%, between 15 and 30%, and less than 75% of the diet. As Figure 1a and 1b below show, the macronutrients in our diet fall within these requirements.

⁸ Children start consuming tea from a very young age in Pakistan; this can be as early as when they are 4-5 years old. Therefore, we include 1 cup per child as we think that is appropriate for children.

Figure 1a: Distribution of Macronutrients in Urban Model Diet

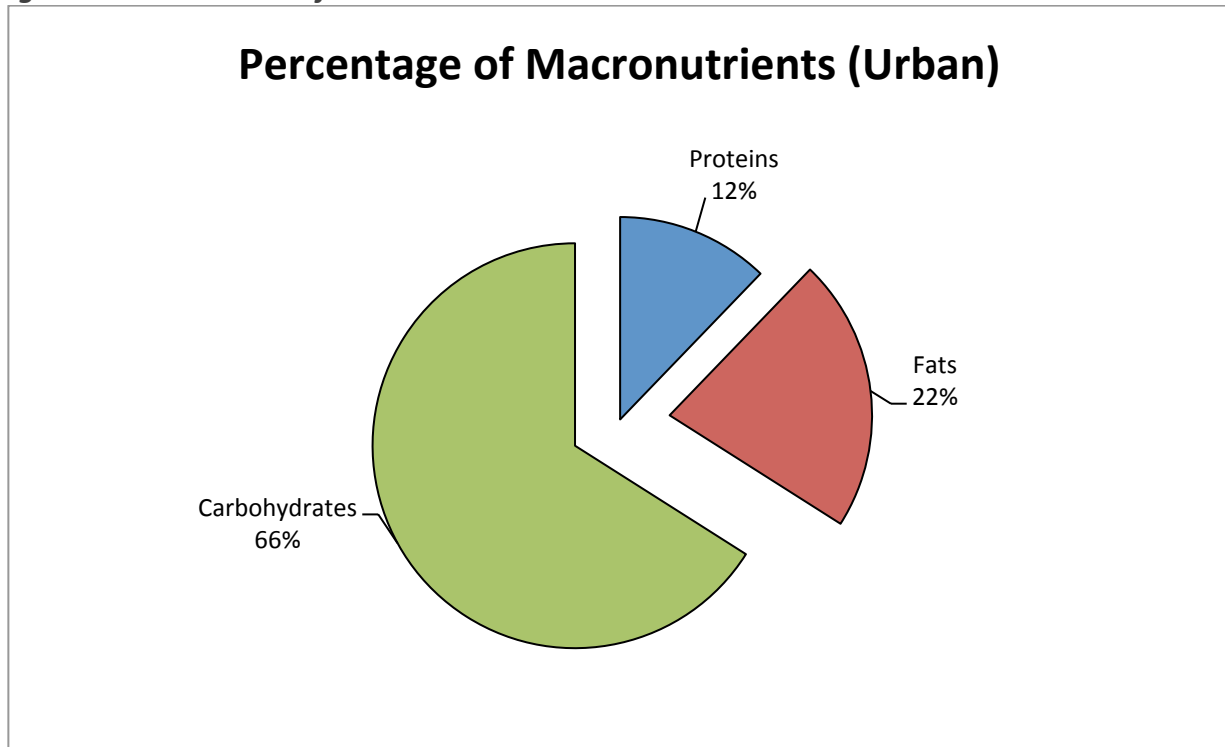
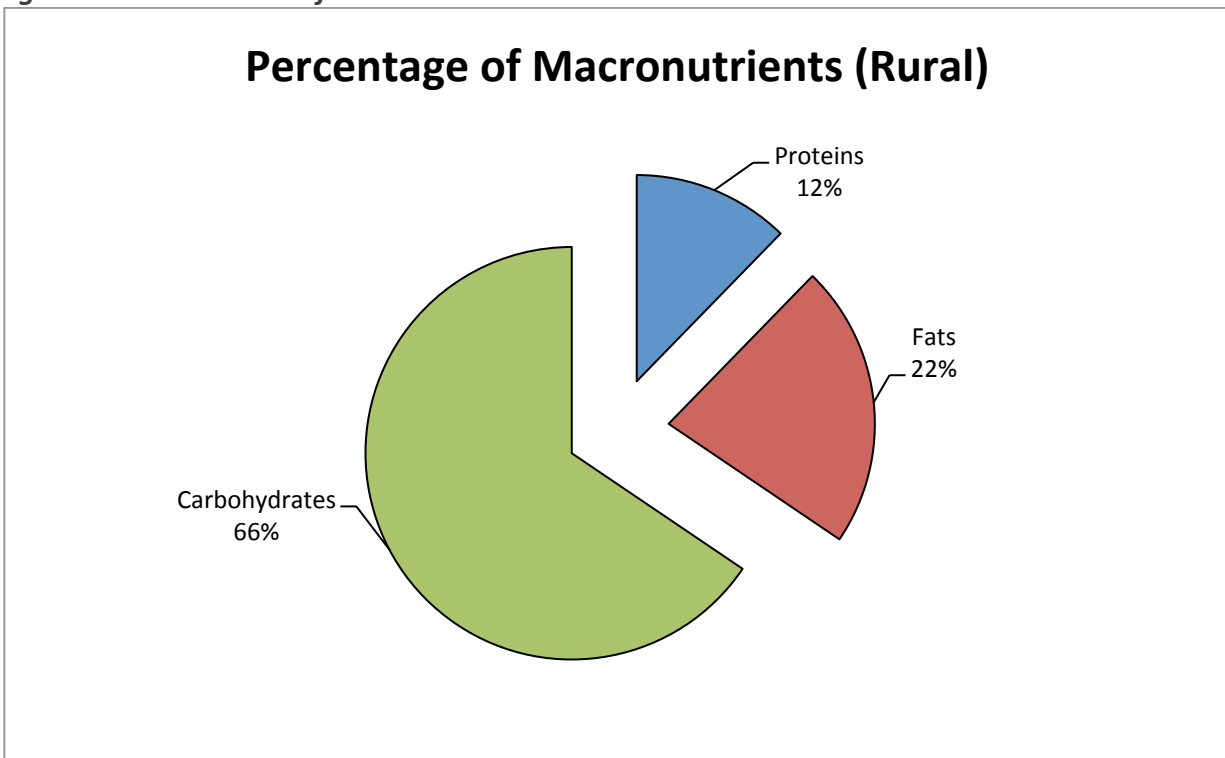


Figure 1b: Distribution of Macronutrients in Rural Model Diet



6.3 Food Prices

To estimate the cost of our model diet, we collected data on prices of different items from those areas where the workers shop. These areas were determined after interviewing the workers. Typically, the workers did their shopping from stalls and shops within their neighborhood. By visiting the markets in these neighborhoods, we were able to estimate the cost of our model diet using prices that workers actually pay.

In each neighborhood, multiple shops and stalls were surveyed to determine the lowest price available for an item with acceptable quality. The lowest price was then used in our calculation. This was done so as to mimic the way cost conscious workers would shop.

We collected prices from 4 neighborhoods in urban Sialkot and 3 markets in rural Sialkot. We collected food prices in December (winter) and April (summer). For each season we calculated the average price across the neighborhoods by using the lowest price for each item from each market. We then averaged the prices from the two seasons and this was the price taken for each food included in our final diet. Also, since some vegetables and fruits are seasonal, we averaged the prices in the two seasons of those fruits and vegetables that were lowest in price per kilo in that particular season. Thus, for example, we used radish in the winter and cabbage in the summer as one of the vegetables in the model diet, and its cost was determined by averaging their respective prices. Additionally, this method uses different food prices for urban and rural areas of Sialkot.

Prices of most foods were collected per kilogram as that was the standard measure. However, some items were sold in other quantities, and prices for those were collected for the quantity that the item was typically sold. The prices for these items were then converted to kilograms and included in our diet. For example, this was the case for eggs and bananas, which were sold by the dozen.

Within each food group, as mentioned in Section 6.2 as well, the lowest cost item was chosen that met local preferences and met nutrition standards and minimum acceptability in terms of quality. Thus, for example, pumpkin was one of the vegetables selected as it had a low cost per edible gram rather than cabbage, which had a high cost per edible gram.

Our diet accounts for seasonal variation as well as the food price surveys were conducted at two different points in time; first in December 2015 (winter) and the second time in April 2016 (summer). There was no significant difference in the prices of a majority of the items.

7. HOUSING COSTS

Housing costs were estimated by summing the cost of: (1) the rent for an acceptable dwelling (or the rental equivalent value when there is no rental market and owner occupied dwellings are commonly used, as was the case in rural Sialkot), and (2) utility costs (gas, water, electricity). The Anker methodology yields better estimates for housing costs for estimating a living wage than other methodologies, particularly in countries where housing conditions for workers is especially poor at present, because it establishes a minimum housing standard and takes into account the cost for that, as opposed to using housing costs from secondary data for existing housing.

For urban Sialkot, we estimated rent per month for acceptable housing to be Rs.6000 (\$57.5), and expenses on utilities were estimated to be Rs.2475 (\$23.7). Therefore, total housing costs in areas near factories in urban Sialkot are Rs.8475 (\$81.3) per month.

In areas near stitching centers located in rural Sialkot, there was no rental market. We estimated the rental equivalent value for owner occupied housing to be Rs.2424 (\$23.2) and expenses on utilities were estimated to be Rs.2186 (\$21) per month. Hence, total housing costs in rural Sialkot are Rs.4610 (\$44.2) – which are lower than for urban Sialkot as expected.

The discussion below details the minimum housing standard that was established as well as how the housing costs were determined.

7.1 Minimum Housing Standard

In order to estimate the cost for basic but acceptable housing, we first set minimum standards for housing for our typical family size (5 in urban, 5.5 in rural), based on international standards⁹ of healthy housing, which were then adapted to the local context by using statistics on housing in Pakistan (from the Demographic and Health Survey 2012-13) and interviews with workers.

The housing standard we set, for both urban and rural Sialkot, includes the following:

- At least 50 sq. meters (2 *marla* in local lexicon) total area
- Walls, roof and floor made of permanent materials such that they are durable
- Walls of acceptable quality can be of cement, concrete or bricks, but not mud

⁹ See, for example, United Nations (1976), Fairtrade International (2014), and WHO (1989).

- Roof of acceptable quality can be made of reinforced cement concrete (RCC) or tier-girder. Without steel and cement is not acceptable.
- Floor of acceptable quality can be of cement or bricks, but not mud
- At least 3 rooms (2 bedrooms and separate kitchen for our typical family)
- Kitchen should have adequate ventilation and food storage area
- At least 1 window per room (preferably 2) for ventilation and light
- Electricity
- Potable water (boring is acceptable if ground water is not contaminated)
- Pit or flush toilet connected to sewage or septic tank
- Building should be in reasonable condition

Data from the 2012-13 Pakistan Demographic and Health Survey (PDHS) shows that the housing standard above is better than current living conditions. For example, in rural Pakistan, almost 60% of houses have mud/sand floors, and more than 40% of houses have only 1 bedroom. While housing conditions are better in urban Pakistan, even there 33% of houses have only 1 bedroom.

During our visits to workers' houses, we found them to be living in cramped spaces. In more than one instance, there were 4-5 people sharing a room. Often, houses also did not have proper ventilation or a separate kitchen. Some houses we visited were also not constructed from permanent materials – this can be dangerous as houses (or their roofs) can collapse in precarious weather. However, almost all the houses were supplied with electricity. Water was also usually available through either a piped supply, or a water pump within the premises or a short distance away. In some areas gas was supplied through pipes, but in others workers had to periodically buy a cylinder filled from nearby.

Despite being better than current living conditions though, our housing standard is very basic. Acceptable houses are small and provide only necessities. For example, running water is not required as water may be brought from a nearby source (community pump etc.). In their construction requirements as well, houses are basic by any measure. The pictures in Figure 2a below illustrate this. Thus, even on a living wage houses would be basic and not extravagant. As a contrast, Figure 2b shows a house in rural Sialkot that did not meet our standard.

Figure 2a: Examples of Acceptable Housing



This is an example of an acceptable kitchen in urban Sialkot as it has good ventilation. The materials used in the construction are also permanent.



This is an example of a room in rural Sialkot, which is made of permanent materials and has adequate ventilation (window covered by white cloth).

Figure 2b: Example of an Unacceptable House



The picture shows a bathroom under the stairs with no roof. The bathroom was right next to the make-shift kitchen, as seen in the next picture. This, along with its poor condition, makes it unacceptable.



The kitchen was out in the open with no proper exhaust. Since it was very close to the bathroom, it was not sanitary. In addition, as the top right of the picture shows, the walls of the house were not permanent, making this house in rural Sialkot unacceptable.

7.2 Rent for Basic Acceptable Housing

The rental market in urban Sialkot was well established. In neighbourhoods where workers lived, we enquired about the rent for acceptable housing from local residents as well as real estate brokers; we determined rent to be Rs.6000 (\$57.5) per month. The range of rental values we came across for acceptable housing was from Rs.6000 to Rs.9000 depending on various factors (such as building condition, exact location in neighborhood, etc.). However, we included the lower bound in our living wage estimate.

In rural Sialkot, however, there was no (or a minimal) rental market. Most houses were owner occupied. Thus, to estimate housing costs we used the cost of constructing a basic acceptable house and made assumptions on the life expectancy and maintenance cost of the house¹⁰. This construction cost was determined by speaking to several construction contractors and builders in two different rural areas and enquiring in detail about the cost of constructing a house based on the specifications of our minimum housing standard.

The cost was almost the same in both areas; Rs.747,200 and Rs.707,200. Assuming a life expectancy of 50 years for a new house (which is typical for developing countries) and including 2% for annual maintenance (which is typical for housing around the world), we determined the monthly 'user cost' of housing for each area. The values were similar, so in our living wage estimation we took the average value of Rs.2424 (\$23.2) per month.

$$\text{Annual Cost} = \begin{aligned} & (\text{Cost of construction} / 50 \text{ year life expectancy}) + \\ & (\text{Cost of construction} * 2\% \text{ for maintenance}) \end{aligned}$$

7.3 Utility Costs and their Estimation

Utilities constitute an important part of housing expenditure and need to be estimated separately. These include electricity, water and gas (used as a cooking fuel). When interviewing workers, we asked in detail how much they spend on utilities and their availability. This was also asked when visiting workers houses (as mentioned earlier, almost all houses had easy access to all three utilities). We then estimated the utility costs by averaging the responses we got (the cost was not dissimilar if we took costs per person in the household and then multiplied by our typical family size of 5 or 5.5).

For urban Sialkot the utility cost we estimate is Rs.2475 (\$23.7), and for rural Sialkot we estimate Rs.2186 (\$21). As a percentage of our estimated living costs for a living wage, this is similar to the percentage according to household expenditure data from HIES 2011-12.

7.4 Summary of Housing Costs

Our estimate for housing costs in urban Sialkot is Rs.8475 (\$81.3) and in rural Sialkot is Rs.4610 (\$44.2). Table 2 below summarizes these costs. Housing costs in our living wage constitute 27.3% of total household expenditure for the urban estimate and 15.9% of the total household expenditure of the rural estimate. This is in the same range as the share of household

¹⁰ The Anker methodology refers to this as the user-cost approach. Their manual (Anker and Anker, 2017) also notes that this approach has been used previously by the World Bank and suggested by the ILO.

expenditure of housing costs from HIES 2011-12 data for the 30th percent of income distribution; for urban Pakistan this is 26.8% and for rural Pakistan this is 18.4%.

Table 2: A summary of the housing costs for Sialkot

	Rental Cost	User Cost Value	Utility Costs	Total
Urban	6,000	0	2,475	8,475 (\$81.3)
Rural	0	2,424	2,186	4,610 (\$44.2)

8. NON-FOOD AND NON-HOUSING COSTS

Typically, poverty lines and living wages only estimate food costs and clump together all non-food costs.¹¹ The Anker methodology is more precise than other methods because it separates non-food costs into two: housing costs (section 7) and non-food non-housing costs (henceforth NFNH).

All NFNH costs in our living wage were estimated as Rs.8453 (\$81) per month for a family of 5 in urban Sialkot and Rs.8501 (\$82) per month for a family of 5.5 in rural Sialkot. The NFNH component covers the following: clothing and footwear, household furniture, contents and appliances, health care, education, transport, communication, recreation and culture, and miscellaneous expenditures such as bank services and personal care.

These costs were estimated in three steps.

Step 1

First, we use data from the Household Integrated Economic Survey (HIES) 2011-12 to determine expenditure on food and NFNH as a percentage of total household expenditure for the third income decile, which is a fair estimation for our living wage. This is done for both urban and rural Pakistan. This is a straightforward approach and provides us a ballpark figure as a starting point to estimate NFNH costs in our living wage.

¹¹ This includes how Pakistan estimates its poverty line. Until recently poverty in Pakistan was measured based on food energy intake, setting a minimum number of calories required. In April 2016, however, a revised methodology was introduced, which was more multi-dimensional in its approach. In addition to food energy intake, this method includes costs of basic needs to capture non-food expenditures (Planning Commission, 2016). While this is more representative of poverty than the previous method, the new approach also clumps non-food costs together.

For urban Pakistan, the share of expenditure on food and NFNH were 45.38% and 28.04% respectively. The corresponding figures for rural Pakistan were 51.82% and 29.93%.

Step 2

We remove unnecessary expenditures from food and NFNH, such as expenses on tobacco (0.94% in urban and 1% in rural) and additional costs associated with owning and operating private vehicle compared to using public transport (0.36% in urban and 0.32% in rural) as these expenditures are considered as not essential for a basic but decent life. The decreased expenditure shares on food and NFNH are presented in table 3 below.

Table 3: The share of non-food non-housing (NFNH) and food expenditures as a percentage of total household expenditure using HIES 2011-12 data.

	NFNH (%)	Food (%)	NFNH/Food Ratio
Urban	27.68	44.44	0.623
Rural	29.61	50.82	0.583

These expenditure shares are then used to determine the ratio of expenditures on NFNH to food. For urban Pakistan this ratio is 0.623 and for rural Pakistan it is 0.583.

The ratios are then multiplied by the food costs we have estimated in section 6 to give us a preliminary estimate for NFNH. In urban areas, the preliminary estimate for costs of NFNH in our living wage are Rs.7788 (\$74.7), and in rural areas the preliminary estimate of NFNH costs is Rs.7896 (\$75.7).

Step 3

Finally, we look carefully at health, education and transport expenditures by doing rapid post-check calculations based on primary data from our field research. This is important because simply extrapolating from secondary data for these vital expenditure groups has the possibility of replicating or reinforcing the existing poverty levels. Therefore, this step involves determining whether sufficient funds are available for the decent provision of these crucial expenses. As such, these expenditures may require additional funds to ensure a basic living standard. The next section explains how the post-checks were conducted and what

adjustments were made to the preliminary estimate of NFNH costs derived from secondary data.

9. POST-CHECKS OF NON-FOOD AND NON-HOUSING COSTS

We need to ensure that our method of estimating non-food non-housing (NFNH) costs by extrapolating secondary data doesn't underestimate the actual costs involved for these categories. This could happen for two reasons. First, because some of these costs vary greatly by region and our secondary data may underestimate these for Sialkot. Second, we have used data on household expenditure, and it is possible that families currently underspend on health and education – which are basic human rights – because they cannot afford them. In our estimate for the living wage, however, we want to ensure that a basic and decent standard is met. Therefore, we conduct rapid post-checks using data from our fieldwork, particularly for health, education and transport, because they are necessary for decency.

It should be noted, however, that other consumption items, such as clothing, communications, furniture, recreation, are also included in NFNH costs. These are not submitted to post-check adjustments because they are not thought to be critical for a decent livelihood. Therefore, we assume that the values for these captured through extrapolating secondary data are correct, or close to actual expenditures on these items.

To determine the amount included for health, education and transport in the preliminary estimate of NFNH costs, we first calculated the ratio of the percentage expenditure on each category as a share of the adjusted NFNH percentage from HIES 2011-12 data. This ratio was then multiplied by our preliminary estimate of the cost of our model diet for our reference size family to give us the amount for each consumption item. These expenditures, according to secondary data, are shown below in Table 4.

Table 4: Amount (in Pakistani Rupees) implicitly included in our preliminary estimate for non-food non-housing costs

	Urban	Rural
Health care	857	1129
Education	919	569
Transport	1083	1019

9.1 Health Care Post-check

Pakistan has an elaborate public health infrastructure that extends to the sub-district level. However, these hospitals can often be at large distances, have long waiting lines and quality of service provision may vary. Hence, given the significant costs of transport and time, for non-critical illnesses people often go to a private clinic or hospital.

In the absence of secondary data on hospital visits, we take the number of visits to health care facilities per year as 3.5 (Anker and Anker, 2017) for both urban and rural areas.

Urban Sialkot

Employees who work in the sports ball manufacturing factories (urban workers) as well as their spouse and children are provided with Social Security, which includes health coverage at the designated Social Security Hospital. According to our interviews with the workers, they or their family members visit this hospital, a public provider, for critical illnesses or for emergencies. Therefore, we keep 1.5 of the 3.5 visits for this public provider.

For illnesses that are not serious, the workers and other family members usually go to the private clinic in their neighborhood. The reason for this is that they save on travel costs, which often exceed the cost of paying private providers. Hence, 2 out of the 3.5 visits we assume are to private providers.

In our fieldwork, we interviewed workers about the number of visits (for the family) to private and public health care provider in the last year and last month and the typical costs for these visits. Using data from our interviews, we assume values for the cost per visit per person. For a private provider, the OPD (outpatient department) cost is Rs.300 and for a public provider this cost is Rs.750¹². These costs are then multiplied for the typical family size and number of visits per person to give us the total cost per reference family per month as Rs.719. This is lower than the estimate from secondary data, of Rs.857. Thus, we do not adjust the amount for health care.¹³

Rural Sialkot

According to our interviews with the workers, they visit government hospitals (public provider), for serious illnesses, for illnesses that persist for quite some time, or for emergencies.

¹² Given the more serious nature of visits to public providers, there will be increased costs for laboratory testing and medicines.

¹³ It should be noted that post-checks are intended to pick up situations where amount included for them in NFNH is too low. They are not intended to pick up and adjust for situations where too much is included for them in NFNH because post-checks are rapid assessments and therefore provide rapid and crude estimations for costs.

Therefore, we keep 1 of the 3.5 visits for public provider, as government hospitals are usually quite far from rural areas.

For illnesses that are not serious, the workers usually go to the private clinic in their neighborhood which is the most convenient for them. Hence, 2.5 out of the 3.5 visits are to private providers.

Similar to urban Sialkot, we found that the cost per visit per person to a private provider is Rs.300 and to a public provider is Rs.750. The total cost for our typical family per month according to this post-check calculation is Rs.688. This is significantly lower than our preliminary estimate of rural health care costs of Rs.1129. Thus, we do not adjust the amount for health care in NFNH for rural Sialkot.

9.2 Education Post-check

Pakistan's public education system has 5 years of primary schooling (class 1 to 5), 5 years of lower secondary schooling (class 6 to 10), and 2 years of upper secondary schooling (classes 11 and 12). There is a small fee for primary and lower secondary schools (Rs.20 per month), while the fee for upper secondary schools is a little more (Rs.375 per month).

To calculate the average cost of education for a typical child, cost of education at each standard – as determined through interviews with key informants and schools – is multiplied by the number of years of school at each level, and then summed up and divided by 18 years of childhood. In this way, we estimated average cost per child per year of childhood. To calculate the average cost for a family, we multiply the estimated average cost per child by the number of children in the typical family.

We consider the public school system as adequate and use that as our standard. We also consider for decency that children should be able to afford to go to school through secondary school. The average cost for the education of a typical child is estimated using data from our field work. In line with the expenses included in the 2011-12 HIES, we account for expenses on tuition fees, books, stationary, bags, and transport.

The total cost for our typical family in urban Sialkot per month according to our post-check calculation is Rs.1583. This is about 70% more than the estimate from the secondary data shown in table 4 (Rs.919). Therefore, we increase the estimate for NFNH costs by the difference (Rs.664).

In rural Sialkot, the total cost per month for the typical family according to our rapid post-check calculations comes out to Rs.1167. This is almost double the estimate from the secondary data

shown in table 4 (Rs.569). Therefore, we increase the NFNH amount by the difference between our rapid assessment estimate of cost and amount for education in the preliminary NFNH estimate.

In summary, it is evident that since national education enrollment is lower than it should be, this results in lower expenditure on average for education in survey data than would be the case if all children went to school through secondary school. Thus, we avoid the trap of replicating the current situation by including a sufficient amount for education in our living wage through a post-check adjustment.

9.3 Transport Post-check

Transport is an important expenditure for households. In urban Sialkot, public transport consisted mostly of vans which served different routes. However, motorcycle rickshaws (referred to as *Chingchi's* locally) also operate on a pattern similar to that of vans on various routes. In fact, in rural areas these motorcycle rickshaws are the dominant form of transport.

The public transport network is decent and ubiquitous enough to not pose commuting problems. Moreover, private transport in the form of privately owned motorcycles, although present, is expensive and not used by the majority. Therefore, we take public transport as our standard.

Cost of passenger transport per month for a worker and his/her family was estimated by summing the cost of different types of travel – this includes commute to work, visits to the city, recreational visits and visits to health facilities – with the cost for each type of travel calculated by multiplying the number of trips per month needed by the cost of a round trip. The costs for round trips for different destinations was determined through interviews with workers as well as others key informants during our field research.

Urban Sialkot

Since the soccer ball factories provide transport for workers (and many other workers in Sialkot walk to work), commuting costs are not included here and are instead considered as an in-kind benefit for soccer ball factories. Hence, we estimate in this section the cost for typical transport besides commuting. It is worth noting in this regard that households in urban Pakistan spend very little on transport compared to urban households in other countries as they spend only 2-3% of all of their expenditures for transport.

Most of our respondents did their food and grocery shopping in their neighborhood as that was most convenient. Therefore, only one trip per adult per month is included for shopping and

errands for which they may have to go into town. Transport for health facilities is calculated using the 1.5 visits per person per year to public providers. Given that these visits may be an emergency, or the person may be too sick to travel in public transport, the costs for this are estimated for transport for hire (such as a rickshaw or taxi). We keep recreational visits to a nearby town as a monthly visit as we consider that decent.

The cost of transport for the household per month using the above assumptions works out to Rs.810. This is lower than the amount implicitly included in our preliminary estimate (Rs.1082), and so we do not adjust the costs for NFNH for transport.

Rural Sialkot

Since the work place is typically within walking distance in rural areas, there is generally no cost to commuting to work. Hence, we estimate costs for other transport expenses for rural Sialkot.

Similar to urban areas, most of the workers we spoke to did their food and grocery shopping in their neighborhood as that was most convenient. Therefore, only one trip per adult per month is included for shopping and errands, for which they may have to go into town for. Transport for health facilities is calculated using the 1 visit per person per year to public providers. Given that these visits may be because the person may be too sick to use public transport, the costs for this are estimated for public transport for hire (such as a rickshaw or taxi). We keep recreational visits to a nearby town as a monthly visit as we consider that decent.

Our post-check calculation gives the total cost per month per household as Rs.1025. This is almost the same as our preliminary estimate (Rs.1019), so we did not make a transport post adjustment for rural Sialkot.

10. PROVISION FOR UNEXPECTED EVENTS TO ENSURE SUSTAINABILITY

Workers living a basic life can easily be thrown into poverty and debt through shocks that lead to large unforeseen expenses. For instance, this can happen because of accidents, major illnesses, death in the family, etc. For that reason, it is recommended that a small margin is included in the living wage to ensure sustainability during unexpected events.

We add a 5 percent margin to the food, housing and non-food non-housing costs estimated earlier (Anker and Anker, 2017). This works out to Rs.1471 (\$14) per month for urban areas and Rs.1333 (\$13) per month for rural areas.

SECTION II – LIVING WAGE FOR WORKERS

LIVING WAGE FOR WORKERS

11. FAMILY SIZE NEEDING TO BE SUPPORTED BY LIVING WAGE

Living wage is a family concept, as shown by the comprehensive review of living wages by Anker (2011) for the ILO. The need for a living wage to support a family is also a part of the definition of living wage used in this report (Section 4).

We use a family size of 5 persons (2 adults and 3 children) for urban Sialkot and a family size of 5.5 persons (2 adults and 3.5 children) for rural Sialkot to estimate the living wage.

These numbers were determined using data on (1) average household size, and (2) total fertility rate and the under-five mortality rate from the Pakistan Demographic and Health Survey 2012-13. To determine the representative family using secondary data on average household size, we excluded 1-person households and households with 9 people or greater¹⁴. In other words, in our calculation of average household size only households with 2-8 members were included, as this is more representative of nuclear households with children and avoids the calculation being distorted by extreme values. This was 5.4 for rural Pakistan and 5.3 for urban Pakistan.

To estimate a typical family size based on fertility rates, the total fertility rate in rural and urban areas was adjusted for under-five mortality rate using the following formula:

$$\text{Adjusted TFR} = \text{TFR} \times (1 - \text{U5MR}/1000)$$

We then use the adjusted total fertility rate¹⁵ to determine the typical family size for rural and urban households, as this could be considered as the expected number of children per household (Table 5). For urban areas, this number is 4.9, which we rounded upwards to 5, because average household size for urban households with 2-8 members was 5.3. For rural areas, this formula yields a family size of 5.7. However, we rounded this downwards to 5.5 as

¹⁴ Single person households are excluded since they are not relevant for determining an appropriate family size for a living wage since single person households by definition do not include children. Households with 9 members or more are excluded because they are large households that most likely are extended family households with more than 2 potential earners, which is not relevant to our calculation when estimating the nuclear family size.

¹⁵ Total fertility rate is “a basic indicator of the level of fertility, calculated by summing age-specific birth rates over all reproductive ages. It may be interpreted as the expected number of children a woman who survives to the end of the reproductive age span will have during her lifetime if she experiences the given age-specific rates.” (UNdata Glossary, 2016) Adjusting this for under-five mortality gives us a more realistic picture of the number of children a woman will have.

this is more consistent with secondary data, which shows average household size for households with 2-8 people to be 5.4.

Table 5: Typical family size calculations (data for TFR and U5MR from the Pakistan Demographic and Health Survey 2012-13)

	Total Fertility Rate (TFR)	Under-five mortality Rate (U5MR)	Adjusted Total Fertility Rate	Family Size (2 adults + Adjusted TFR)
Urban	3.2	74	2.9	4.9
Rural	4.2	106	3.7	5.7

12. NUMBER OF FULL-TIME EQUIVALENT WORKERS IN FAMILY PROVIDING SUPPORT

Living wage is a family concept and, therefore, it is reasonable to expect more than one person in the family earns. Previous methodologies have assumed that either 1 worker per family (based on the male breadwinner model of the household), or 2 workers per family (where it is assumed both spouses work full-time all year around).

In this methodology, we take more than one worker, but less than two full-time adult workers because of voluntary inactivity, unemployment, and part-time work.

Data on labour force participation rates (LFPR), unemployment rates and part-time employment rates is gathered from the Labour Force Survey 2014-15 (Table 6). We then use the following formula to determine the probability that a person in the working age is a full-time worker.

$$\begin{aligned}
 & \textit{Probability person age 25 – 59 is a full – time worker} \\
 & = \textit{LFPR (ages 25 – 59)} \times (1 - \textit{Unemployment rate (ages 25 – 59)}) \times (1.0 \\
 & - (\textit{Part – time employment rate}/2))
 \end{aligned}$$

The idea behind this formulation is that the greater the participation rate, the lower the unemployment rate; and the lower the part-time work, the more likely it is that an adult family worker is working full-time. This probability is then added to 1 to determine the number of full-time equivalent workers in the reference family to represent that one family member is working full-time in the sports ball industry.

$$\begin{aligned} & \text{Number of full time equivalent workers} \\ & = 1 + \text{Probability person is a full – time worker} \end{aligned}$$

As Table 6 shows, the number of full-time equivalent workers we use for urban Sialkot is 1.53 workers and for rural Sialkot we use 1.65 workers.

Table 6: Data from the Labour Force Survey 2014-15 used to estimate number of workers in our reference family

	Labour Force Participation Rate ages 25-59	Unemployment Rate ages 25-59	Part-time Employment Rate¹⁶	Probability person is a full-time worker	Number of full-time equivalent workers for reference family
Urban	55.95	4.21	0.7	0.534	1.53
Rural	67.23	3.18	1.3	0.647	1.65

The total household cost for a basic but decent living standard is then divided by the number of full-time equivalent workers for urban and rural areas respectively to arrive at the living wage required per worker for each area. Thus, for urban Sialkot we divided Rs.31,085 (\$298) by 1.53 to arrive at a net living wage of Rs.20,264 (\$194). For rural Sialkot we divided Rs.28,920 (\$277) by 1.65 to arrive at a net living wage of Rs.17,559 (\$168).

13. GROSS PAY AND TAKE HOME PAY REQUIRED

The net living wage determined above was estimated using the total costs of a typical family. Thus, this should be taken as the needed take-home pay for workers. However, the gross living wage (the amount actually paid to the workers) should take into account taxes and mandatory deductions.

For workers in factories (urban) there is a deduction of Rs.80 per month for social security, which gives them and their family access to health facilities. This is thus added to the net living wage to arrive at the gross living wage, which is Rs.20,344 (\$195). The income for the workers is below the income tax threshold and there are no other applicable taxes to factor into this.

For workers in stitching centers in the rural areas, there are no mandatory deductions and no applicable taxes, therefore, the net living wage is equal to the gross living wage.

¹⁶ Part-time employment rate comprises all employed persons who during the reference period satisfied the following two criteria simultaneously: i) worked less than 35 hours per week, and ii) sought or were available for alternative or additional work.

SECTION III

ESTIMATING GAPS BETWEEN LIVING WAGE AND PREVAILING WAGES

14. PREVAILING WAGES IN INDUSTRY OF FOCUS

It is necessary to gauge the prevailing wages in the sports ball industry in Sialkot so as to compare this to our living wage estimate.

There are two types of workers in the sports ball industry in Sialkot, as explained in Section 3: (1) workers in factories in urban Sialkot; and (2) workers in rural Sialkot who work in stitching centers.

Urban worker

The first type of worker, in urban Sialkot, typically works on the shop floor and his/her work involves operating machinery or cleaning and/or inspecting the sports balls made. In the two FairTrade certified factories we visited, all workers were at least paid government minimum wage (Rs.13000 or \$125)¹⁷ as a monthly salary. In fact, a majority were paid minimum wage or a few hundred rupees more than minimum wage. Only a few workers were paid much more, and these were usually ball inspectors, who were responsible for ensuring the sports balls produced are being made according to their standards. One of the factories provided us data on the average wage of their workers; according to them this was Rs.13628 (\$131) per month. This seems an accurate figure and is similar to what we found during interviews with workers.

It should be noted that these workers are full-time permanent workers. There is no seasonal variation and they have employment throughout the year. Hence, it is not necessary to take into account the shortage of workdays during the year. Besides their basic wage, they do not work overtime and don't get any cash allowances. They receive only one in-kind benefit (of transport), which we value at Rs.184 per month as discussed in Section 15.

Thus, we increased the prevailing wage in urban Sialkot's sports ball industry (Rs.13,628) by our estimated value of in-kind benefits (Rs.184) to get a gross prevailing wage (Rs.13,812) to compare to our gross living wage estimate of Rs.19,960 which, in comparison to this, is around 45% higher.

Rural worker

¹⁷ This was in December 2015, when we did our field work. In June 2016, the government increased the minimum wage to Rs.14000. However, throughout this report we use Rs.13000 as the minimum wage as that was in place for our reference period.

The second type of worker, in rural Sialkot, is usually a sports ball stitcher. They operate out of small stitching centers (often this is just a room) that have been set up in villages outside Sialkot city and are provided with raw material (Rexene), which they stitch into sports balls. We visited 4 stitching centers in different rural areas.

Sports ball stitchers are paid by piece rate, so their wage varies significantly by how productive they are. Typically, there are three different rates per ball stitched depending on the size of the sports ball. At one stitching center, where all the workers were male, the three rates were Rs.60, Rs.70 and Rs.85. But at another center where all the workers were female, the rates were Rs.58, Rs.63 and Rs.67 – indicating possible gender inequality of pay in the industry – although one needs to be cautious on drawing conclusions based on so few examples. All workers worked 6 days a week, but male workers indicated that they stitched more sports balls than females. Female workers on average said they stitch 3 sports balls a day, as they leave early to tend to household tasks. On the other hand, male workers said that they stitched 5 balls per day on average.

Thus, the monthly wage varied considerably for workers we interviewed, with the lowest being around Rs.4500 and the highest being around Rs.10,000. The median wage, which we took as the prevailing wage, was Rs.8000 amongst our respondents. Although our sample was not large or representative, this value of Rs.8,000 is indicative of the wage an average worker at a stitching center would make in rural Sialkot. In comparison, our gross living wage estimate for rural Sialkot of Rs.16,993 is around 110% greater than the prevalent wages here.

Rural workers also reported having work throughout the year. Besides their piece rate based earnings, they did not receive any in-kind benefits or cash allowances.

14.1 In-kind Benefits as Partial Payment of Living Wage

Workers in rural areas do not receive any in-kind benefits. However, workers at many larger factories in urban areas are provided a free company bus that picks them up from designated spots around the city. This is true for a majority of the larger sports ball establishments, and except for those living within walking distance of the factory, most of the workers use company transport.

There are various ways to value this in kind benefit of free company buses as partial payment of a living wage. The way we decided on was to subtract the amount needed by the reference family for all transport other than commuting as estimated in the post check section (such as for trips to town to buy food, errands, visits to doctors, some recreation, some travel for recreation) from the amount households typically spend on transport according to statistics on

urban household expenditures according to the 2011/12 HIES.¹⁸ This difference provides a very rough estimate of typical expenses for commuting to work for urban Pakistan. We used this amount to value the in kind benefit of a free bus to work in a large soccer ball factory in Sialkot to ensure that enough funds for transport are included in our estimate of NFNH costs and so our living wage.

We estimate the value per month of this in-kind benefit as Rs.184. In Section 9, we discussed our post-check calculation for transport costs. Our estimate of urban transport costs, which did not consider the cost of commuting to work, was Rs.810 for our reference family. The preliminary estimate of transport costs included in our preliminary estimate of NFNH costs (based on secondary data for transport costs for our reference family in urban areas) was Rs.1092. We feel that the difference between our post-check estimate and our estimate of transport costs included in NFNH could be considered a reasonable value for the in kind benefit of a free company bus for commuting to work. This is Rs.282. However, since we assume that there is more than one worker in each family, we divide this by the number of workers in the urban reference family (1.53) to arrive at a value of in kind free transport to work per worker. This is Rs.184 and this is what we feel is reasonable to use as our estimate for the value of the transport in-kind benefit provided to urban workers in large urban sports ball factories. If we did not follow this approach, the value of free transport would have exceeded the amount included for transport in NFNH.

Another method that could be used to estimate the value of free transport to work would be to estimate the market value of the commute for the worker, i.e. if the worker had to come on their own and was not close enough to walk or bike, how much would the round-trip journey cost them. We estimate that this would be Rs.60 per day. One reason we did not use this valuation method is because the cost of providing transport to workers to the factory is lower than the market cost and one common principle of valuing in kind benefits as partial payment of wages is that factories providing this service should not make a profit on this. Therefore, the cost of providing transport is not equivalent to the amount 'saved' by workers for not having to pay for their commute to and from work. A second reason we did not use this other method is that providing free transport to work is a major benefit to factories and so factories provide buses for their own business reasons. Company buses: (i) ensure that workers are able to come to work on time and (ii) ensure a steady supply of workers at current wages since most workers would not be able to afford on current wages to commute to work by public transport if they had to pay for public transport. In the case that free transport were not provided, attendance

¹⁸ The situation in urban Sialkot is a little unusual in that workers in general spend very little for commuting to work and this is reflected in the available household expenditure statistics. Most workers either walk to work or commute to work in free company buses.

would vary for the legitimate reason of accessing an inefficient transport system which often entails changing one or two vehicles to get to the place of work from their homes. Free company buses to work is thus in a sense a necessary business expense.

Another thing to be noted is that one of the factories we visited provided lunches to workers at a cost. We do not include this as an in-kind benefit for two reasons: first, because we do not know whether meals were subsidized and sold at less than cost, and if they were by how much; and, second, because most workers did not avail this because they preferred to bring food from home (which is accounted for in our estimate of food costs for the reference size family).

15. LIVING WAGE IN CONTEXT: WAGE LADDER AND RECENT WAGE TRENDS

This section compares our living wage estimate with the prevailing average wage as well as other wage and poverty benchmarks.

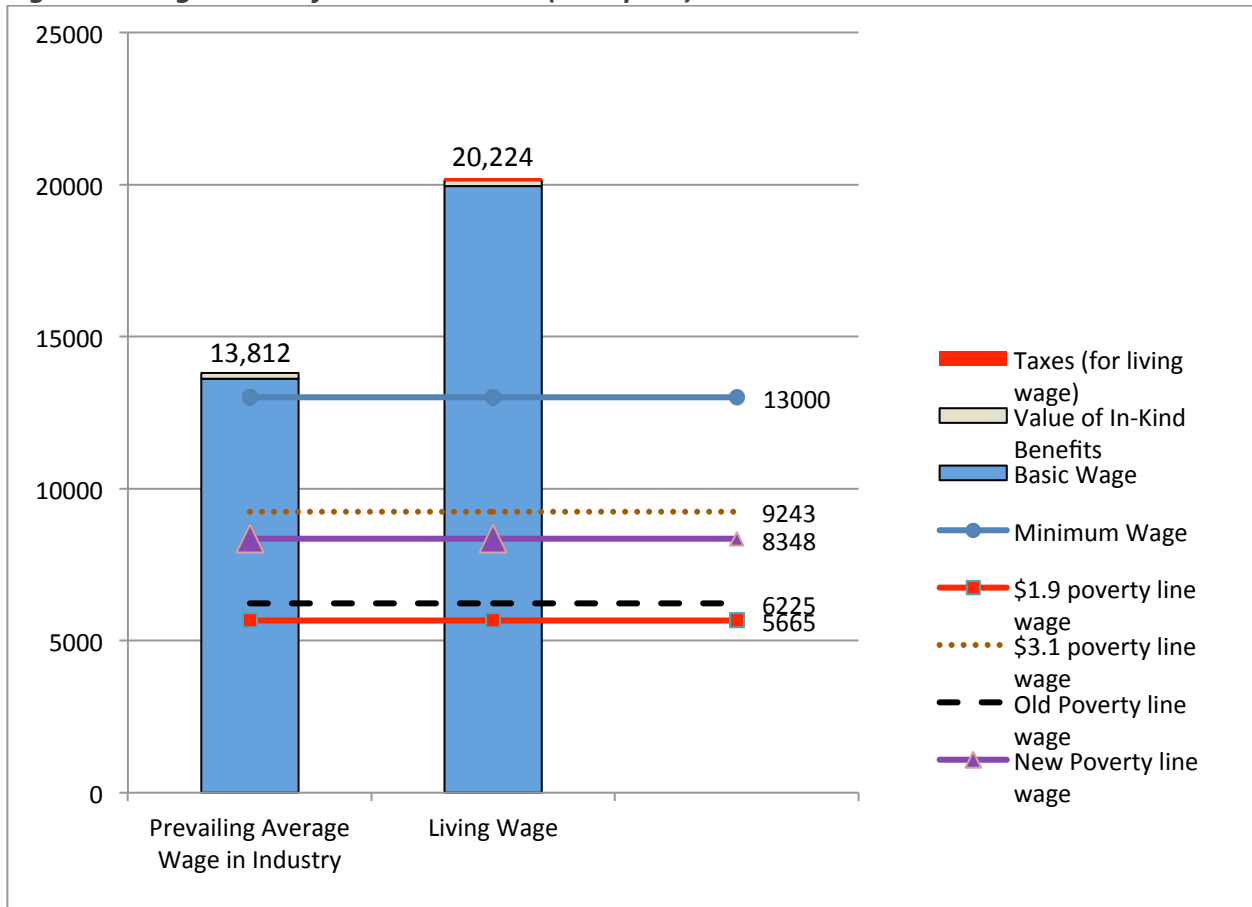
Figure 3 provides a wage ladder for urban Sialkot, depicting our living wage as well as other comparative benchmarks. Our gross living wage (Rs.20,224) is markedly greater than the prevailing average wage in the sports ball industry in Sialkot (Rs.13,812), the wages derived from the Pakistan government's old (Rs.6,225) and new (Rs.8,348) poverty lines¹⁹ as well as the implied wages from the World Bank \$1.9 (Rs.5,665) and \$3.1 (Rs.9,243) poverty lines.

However, this does not mean our living wage is extravagant or an ideal. These differences are to be expected given that according to the new poverty line estimated by the Government of Pakistan, almost a third of the population lives in poverty (Khan, 2016). Moreover, even for many of those living above this line, standards of living are quite poor, thus, our living wage provides a conservative estimate for a basic but decent living standard.

Figure 4 provides a wage ladder for rural Sialkot, and shows the gap between our living wage estimate and the comparative benchmarks. Similar to the urban estimate, our rural living wage is significantly higher than the minimum wage as well as the implied wages from the government's old (Rs.6,791) and new (Rs.9,107) poverty lines and the World Bank's \$1.9 (Rs.6,232) and \$3.1 (10,167) poverty lines. In fact, our living wage is more than twice the prevailing average wage in rural Sialkot, which itself is also much lower than the minimum wage. This reflects the much lower standards of living present in rural Sialkot and in rural Pakistan in general.

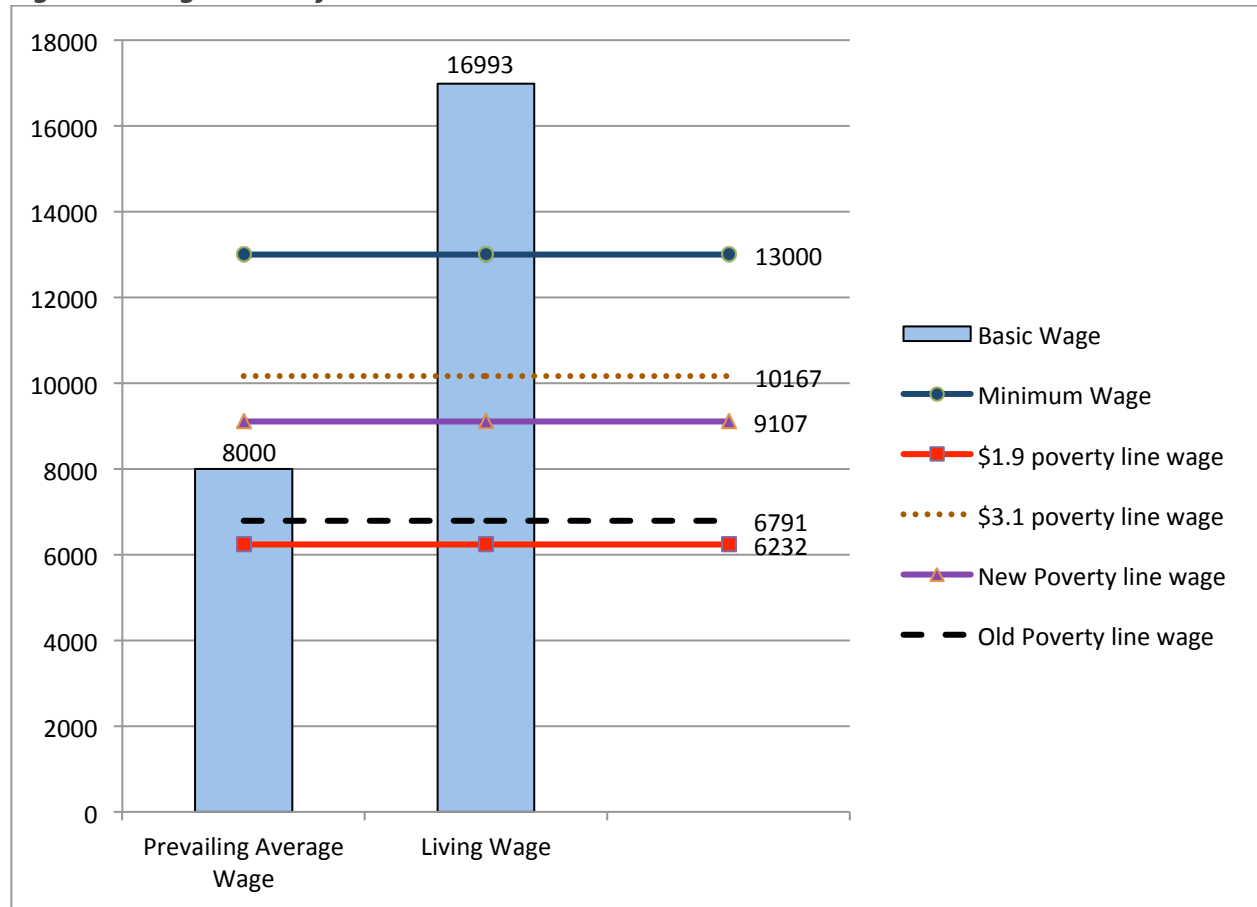
¹⁹ The government adopted a new poverty line in April 2016 using a more comprehensive methodology, which is why we show both.

Figure 3: Wage Ladder for Urban Sialkot (in Rupees)



Source: The Author

Figure 4: Wage Ladder for Rural Sialkot



Source: The Author

16. CONCLUSION

Tables 7 and 8 provide the summary of the process through which living wages in urban and rural Sialkot were estimated. Table 9 indicates some of the key assumptions used to estimate our rural and urban living wages. The take home urban and rural living wages are Rs.20,144 and Rs.16,993 (US \$ 193 and \$163 respectively). There is virtually no difference between the gross and net take home living wages because of low or non-existent taxes and in-kind benefits in both rural and urban areas. Workers in rural areas are employed informally and thus neither pay taxes nor are they entitled to any in kind benefits. In-kind benefits and mandatory deductions – both small in magnitude - almost cancel each other out in the urban areas.

Because factories in urban areas generally comply with national laws, the average wage is only slightly higher than the government prescribed minimum wage at the time. The existing wages are also higher than the new national poverty line wage and the World Bank \$3.1 a day poverty line wage. However, as we saw in Section 16, the current average urban wage in the soccer ball industry is one third less than our urban estimated living wage. The wage gap to a living wage in rural areas is even wider. The existing wage is not only less than half of the estimated living wage but also 39% less than the national minimum wage and 15% less than the new national poverty line wage.

So far as the estimation of the living wage is considered, we have ensured that while complying with standards of sufficiency and decency set out in Section 4, the least cost options of estimating this were chosen. We did two surveys on food prices – in the winter and early summer – to gauge seasonal differences in prices. Since prices vary a great deal across seasons, particularly for vegetables and fruits, prices used in our survey represent the food prices that workers and their families are likely to incur. While food consumption on the whole was adequate, the consumption of proteins is reasonably low because of high cost of proteins. The main sources of protein in our model diets are chicken (other meat products are considerably costlier), dairy and lentils. Traditionally low income households got the bulk of their proteins from lentils. However, since the 2008 global commodity prices shock, the price of lentils have remained high and the gap between the price of chicken and lentils has reduced. So in addition to including the lowest priced lentils, we also included two chicken meals and two eggs a week in our model diets along with milk to provide for the required intake of proteins. Most urban workers we interviewed ate chicken once a week while most rural workers we spoke to ate chicken once in two weeks. We do not consider the amount of chicken, milk and egg in our model diets to be extravagant. Rather we consider it necessary for getting sufficient proteins for a nutritious model diet.

Housing in the urban sample of worker houses that we visited, although better than rural housing, didn't generally meet our standards. The covered area, ventilation and utility provision was of adequate standard, but the number of occupants per room and conditions of the houses were not acceptable. In rural areas, in most cases houses did not have separate kitchens, ventilation was inadequate, and often there were no separate rooms for children making living extremely cramped.

Sialkot and its environs are known for producing sports goods and surgical instruments for more than six decades. This district alone accounts for one tenth of Pakistan's merchandise exports. Exports of sports goods specifically – all produced in Sialkot – have also seen an increasing trend in the recent past. Because of this unique positioning of Sialkot, it is best placed to reduce the wage gap compared to any other region in Pakistan.

The onus on reducing the wage gap to a living wage in urban areas rests with employers as well as the entire value chain of sports ball production. The employers work in a competitive global environment and appeared in urban areas to comply by and large with domestic labour standards. It will thus be difficult to convince the employers to work towards closing the gap to a living wage for factory workers all by themselves although they could be asked to increase wages and provide more in-kind benefits in the form of health care, educational benefits for children of workers, and free lunch. These will contribute towards closing the wage gap, albeit marginally. It is the rest of the value chain, including the standards organizations, that will have to provide adequate incentives for employers to reduce this gap.

The Government has a role in rationalizing the minimum wage based on the living wage assessment provided in this study. While it may not be possible for the government to set a minimum wage for the entire economy at a living wage, it may be possible to raise the minimum wage somewhat. This will contribute towards reducing the wage gap.²⁰

Addressing the wage gap to a living wage in rural areas will require action from a number of stakeholders. The most important in our view is the Government. That workers in rural areas are all informally employed means that there is a concomitant gap in compliance with existing labour laws. The government should ensure that the minimum wage is provided to rural workers and ensure that they are registered with the Social Security Institute that provides health benefits. Having said this, there is however, the issue of a trade-off between employment and wages in this case. If rural employers are compelled to pay wages as per the law, then rural employment might be significantly lowered, since this would reduce the

²⁰ It is worth noting that on July 1, 2016 the government raised the minimum wage from Rs. 13,000 to Rs. 14,000 per month. This is a 7.7% increase, which is slightly higher than the 4.1% year on year July 2016 inflation rate.

incentive for employers to continue producing hand stitched sports balls in rural areas. Perhaps, there can be a lower threshold for the minimum wage that can be instituted for rural workers that is less than that for urban factory based workers (just as we have found a lower living wage in rural areas than in urban areas). The Government can also provide social protection to all workers in the rural areas. Presently, there is a large cash transfer scheme – known as the Benazir Income Support Program (BISP) – in Pakistan. Because of fiscal constraints, the beneficiaries of this scheme are concentrated around the lowest 2 deciles of the population. Since the workers in the sports ball industry would fall a bit higher in the income distribution, if the government expands this scheme further, the wage gap to a living wage for rural workers will reduce.

The onus for reducing the gap to a living wage should also be borne partly by the value chain and consumers of hand stitched sports balls. If compliance on payment of a higher wage is made a condition of contracts by multi-national companies, then the employers will have to be compensated by increasing the unit price of balls in a way that profit margins are sufficient for sustainability of the soccer ball industry.

Table 7: Summary Table for Urban Sialkot

PART I. FAMILY EXPENSES	Pakistan Rupees	US Dollars
Food cost per month for reference family (1)	12,501	120
Food cost per person per day	82.2	
Housing costs per month (2)	8,475	81
Rent per month for acceptable housing ^a	6,000	
Utilities and minor repairs per month	2,475	
Non-food non-housing costs per month taking into consideration post checks (3)	8,453	81
Preliminary estimate of non-food non-housing costs	7,788	75
Health care post check adjustment	0	
Education post check adjustment	664	
Transport post check adjustment	0	
Additional 5% for sustainability and emergencies (4)	1,471	14
Total household costs per month for basic but decent living standard for reference family (5) [5=1+2+3+4]	30,900	296

PART II. LIVING WAGE PER MONTH		
Living wage per month, net take home pay (6) [6=5/#workers]	20,144	193
Mandatory deductions from pay (7) (list these in notes to table, e.g. taxes)	80 ^{a b}	
Gross wage required per month for Living Wage (8) [8=6+7]	20,224	195
PART III: LIVING WAGE IN INDUSTRY CONSIDERING VALUE OF TYPICAL IN KIND BENEFITS AND CASH ALLOWANCES IN INDUSTRY		
Value per month of common in kind benefits in industry (9A) (list in notes to table)	184 ^b	1.76
Value per month of common cash allowances in industry (9B) (list in notes to table)	0	0
Living Wage take home pay in industry, when workers receive typical in kind benefits and cash allowances in industry (10) [10= 6-9A-9B]	19,960	191
Living Wage gross pay in industry if worker receives typical in kind benefits and cash allowance in industry (11) [11= 8-9A-9B]	20,040	192

Notes: ^a Rs.80 are deducted per month for the worker's contribution to the Employees Old-Age Benefits Institution (EOBI).

^b Transport to and from work is provided by the companies. See Section 15.

Table 9: Key values and assumptions for urban Sialkot

Location & industry	Urban Sialkot
Exchange rate of local currency to USD	104.3
Number of full-time workdays per month	26
Number of hours in normal workweek	48
Number of workers per couple	1.534
Reference family size	5
Number of children in reference family	3
NFNH/Food costs preliminary ratio	0.623

Table 8: Summary Table for Rural Sialkot

PART I. FAMILY EXPENSES	Pakistan rupees	USD
Food cost per month for reference family (1)	13,544	130
Food cost per person per day	80.96	
Housing costs per month (2)	4,610	44
Rent per month for acceptable housing (user cost value indicated)	2,424	
Utilities and minor repairs per month	2,186	
Non-food non-housing costs per month taking into consideration post checks (3)	8,501	82
Preliminary estimate of non-food non-housing costs	7,896	76
Health care post check adjustment	0	
Education post check adjustment	604	
Transport post check adjustment	0	
Additional 5% for sustainability and emergencies (4)	1,333	13
Total household costs per month for basic but decent living standard for reference family (5) [5=1+2+3+4]	27,987	268
PART II. LIVING WAGE PER MONTH		
Living wage per month, net take home pay (6) [6=5/#workers]	16,993	163
Mandatory deductions from pay (7) (list these in notes to table, e.g. taxes)	0	
Gross wage required per month for Living Wage (8) [8=6+7]	16,993	163

Table 9: Key values and assumptions for Rural Sialkot

Location & industry	Rural Sialkot – sports ball stitching centers
Exchange rate of local currency to USD	104.3
Number of full-time workdays per month	26
Number of hours in normal workweek	48
Number of workers per couple	1.647
Reference family size	5.5
Number of children in reference family	3.5
NFNH/Food costs preliminary ratio	0.583

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