Chapter 11

Summary

This chapter summarizes the study’s findings and the important conclusions drawn from the empirical analysis. In brief, this thesis has examined sources of household income, income inequality in rural and urban areas and determine the sources of household income in Afghanistan especially in the five main provinces. Data on different situations of households were collected through questionnaires on household income in Afghanistan. Five provinces were selected namely Kabul in the central part of Afghanistan, Herat in the western, Kandahar in the south, Nangarhar in the east and Balkh in the north part of Afghanistan for collection of the required data. A sample of 1,236 households was selected using a stratified sampling strategy with respect to the five provinces. To study the correlation between sources of income and monthly income of households and to recognize the factors effecting household income multiple regression analysis with the assumption of the Mincer Model, the Cobb-Douglas production function and a pooled estimation with separate analysis of the Mincer Model and the Cobb-Douglas production function were used. Finally, after the above analysis, results were obtained. Most of the results are quite new even though a few of the findings have been confirmed by previous studies carried out in other countries on a similar topic.

- Average household size was found to be 8.05 members per household, which is higher than in a neighboring country like Iran, which has 4.8 persons per household. The size of households in Kabul, Herat, Kandahar, Nangarhar and Balkh was 7.44, 7.92, 7.37, 8.32 and 10.20 members per household, respectively.

The education level of sample households in Kabul was 23.82 %; in Herat 19.95 %; in Kandahar 18.59 %; in Nangarhar 16.82 %; and in Balkh was 20.80 %. The household members were found to have different levels of education, ranging from high school to Ph.D. degree level of education.

- The sample had a very youthful age, 66.42 % of household members were at an age of between 18-36 years.

The occupations of the sample households were different for each of the research areas in the five provinces. However, the main occupation of the household members in the rural areas was farming while in the urban area most of the household members had employment and self-employment activities as their source of livelihood.

Sources of household income were different in urban and rural areas. Households in
urban areas had formal employment, self-employment, NGO income, social-transfers and remittances as their income sources. For rural areas, households had farming, livestock and narcotics as their sources of income. The higher average income of households in the urban areas was from employed activities and this made up 34.70 % of the total income of households in the study area. In the rural areas, farming contributed 65.82 % of total income for the livelihood.

- The Gini-coefficient found for household income was 0.22. The Gini for per capita income inequality was estimated to be 0.20 in all the areas. The Gini for working members was assessed at 0.27. Kandahar and Herat had the highest level of Gini value estimated at 0.24 while the lowest value of Gini was found in Herat at 0.19. In addition, the highest per capita income was found in Balkh and that was at 0.25, but the lowest per capita income estimated was in Kabul at 0.19. The highest value of per working member’s income inequality estimated in Nangarhar was 0.29, while the lowest was found in Balkh, which was 0.22.

- The total income inequality by analysis of variance in rural and urban areas was 1786465060.6, but the income inequality between two areas was estimated at 44370410.2. Furthermore, the income inequality within the areas was 1742094650.4.

- The total income inequality measured by the Theil Index for the whole data-set (urban and rural data) was 0.20. The contribution of the urban area for this value was 0.15 whereas the contribution of the rural area was 0.05.

- For measurement of income inequality in the research area quintiles were used. The households and their income were divided into five quintiles. Each quintile shows 20% of the income of the household. Average monthly income of the bottom quintile was 255.34$ and made up 10.62 % of the total household income. In the lower middle quintile the average monthly income was 355.29$ and made up 14.87 % of the total income of the household. The middle, upper middle and top fifth quintiles of the households had average monthly income of 453.31 $, 566.42 $ and 771.8 $ per household per month respectively, which represents 18.94 %, 23.57 % and 32.08 % of the total income of households respectively.

- For measurement of income inequality in each province, the households and their income sources were divided into two quintiles. In Kabul province, the bottom quintile was estimated at 259.98 $ per month and the top quintile was 719.55 $ per month. This represents a 459.7 $ difference between two groups. In Herat province, the bottom quintile earned 279.75 $ per month and the top quintile was 784.75 $ per month. The difference between two values which was 505 $ represents the level of inequality in this province. In Kandahar province the bottom quintile had an estimated 250.75 $ per month and the top quintile had 824 $ per month. The difference between the two quintiles that was estimated as 573.25 $ represents the income inequality in this province. In Nangarhar province, the bottom quintile earned an estimated 250 $ per month and the top quintile earned 777.5 $ per month. The difference between these two quintiles represents the total income inequality that was estimated as 527.5 $. In Balkh province the bottom quintile had an estimated income of 234.25 $ per month while the top quintile earned 770.62 $ per month. The difference between these two quintiles represents the total income equality that was estimated as 536.37 $.

- Sources of household income in the study areas were divided into two categories:
farm and non-farm sources of income. In the rural areas, most of the households reported farm activities as the main source of income in their livelihood and this was reported by 31.15% of the total households. Livestock and narcotics were another source of income in the rural areas and they contributed 16.10% and 5.66% respectively to household income. In the urban areas, most of the households reported formal employment as an income source in their livelihood and this represented 32.77% of the households. Self-employment, social-transfers, remittances, NGO income and savings were the other income-generating activities in the study area. These activities were reported an 29.45%, 9.63%, 23.06%, 25.16% and 12.715% of the households respectively.

- The average monthly income of household from employment income was estimated at 106.02 $ per month. It was the highest income distribution while the lowest average income was contributed by narcotics and this was estimated at 10.51 $ monthly. The average monthly income from farm related activities was 259.49 $ while that from non-farm sources of income was 224.93 $ per month. This shows that farm activities contributed more income than non-farm related activities in the research area.

- In the Mincer Model the log of income of the sample households was explained by different explanatory variables. These variables include: age of household head, number of children, experience of members, savings, languages, household size, number of female members, remittances, level of education, number of males, married, narcotics, four dummy variables (i.e. Herat, Kabul, Kandahar, Nangarhar and Balkh) and experience squared. Among these explanatory variables the age of the household, the number of children, the experience of members, savings, languages, narcotics and four dummy variables were positively related to household income.

In this regression, the Balkh province was the base group. Furthermore, the coefficient of dummy variables gave the difference in comparison to the base group. The result shows that income level of household in Herat was higher than in the other four provinces.

- In a separate analysis the Mincer Model was considered in each province to determine factors effecting total household income. Empirical results of the model revealed for Kabul that number of children, number of male household members, experience; savings, household size, narcotics and languages were positively correlated to household income. In Herat province, it was noted that the number of children, household size, savings and number of females were positively related to household income. In Kandahar province the explanatory variables such as experience, savings, narcotics and number of females members were positively correlated to household income. In Nangarhar province, the age of household heads, narcotics and savings were positively correlated to household income. While in Balkh province, number of males, number of females, household size, savings and languages were correlated to household income.

- A production function has been also considered. The model was estimated in two ways. First, the Cobb-Douglas function used independent variables including capital, land, labor. It was noted that among these variables log capital, experience, languages and narcotics were significantly related to log of monthly household in-
In the pooled estimation the data shows that there is no correlation of residuals across the five provinces. The analysis used fixed effect estimation where the standard errors are corrected with respect to a non-diagonal covariance matrix of the residuals. In pooled estimation, the data represents different residual variances in the five provinces. A feasible GLS estimation was applied to a cross section heteroscedasticity to confirm the frequency result with respect to the significance variables.

The log of income in the research area was regressed on explanatory variables of rural and urban areas separately in order to determine the difference in the factors effecting total household income. The overall result indicates that there were differences not only between rural and urban regions but also for the urban regions across the five provinces and the rural regions across the five provinces.

In rural regions the result shows differences in the five provinces. The intercept for Kabul, Herat, Kandahar and Balkh was the same, but larger for Nangarhar. Experience was only significant for Kabul and Herat with equal coefficients. The number of children is significant only for Nangarhar. Education is only significant for Nangarhar and narcotics is only significant for Balkh with a negative economic impact.

In urban regions the result shows obvious differences in the five provinces. The intercept is also equal for the five provinces. Experience is only significant in Kabul and Kandahar, but the impact on Kandahar was larger than in Kabul. The number of female household members and languages were only significant in Balkh, but female had a negative impact. Remittance is only significant in Herat. Savings is significant in Kabul, Herat and Balkh, but its impact in Herat and Balkh were equal and larger than in Kabul.

The results for the 2015 data were compared to the results of 2009 data using multiple regression analysis. The two estimations show a small but statistically significant difference: age of household heads was significant in both periods with a negative impact. The number of children is only significant in 2015. Married family members and females are only significant in the 2009 data set. Experience, languages and savings were only significant in 2015 with a positive correlation on household income. The dummy variables Kabul and Herat were significant in 2009 with negative impact. The four dummy variables Kabul, Herat, Kandahar and Nangarhar were significant in 2015 with a positive impact on household income. Narcotics is significant in both periods.