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RURAL
CANADA



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STRENGTHENING RURAL CANADA: Fewer & Older: Population and Demographic Crossroads in Rural Saskatchewan

An Executive Summary

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INTRODUCTION

Many rural communities in Saskatchewan are facing challenges. Data derived and analyzed from both the 2001 Census and the 2011 National Household Survey (NHS) contained in this study paint a picture of rural Saskatchewan at a crossroad. The outmigration of youth, aging populations, lower educational attainment levels and significant long-term population decline in rural areas do not bode well for rural Saskatchewan's future economic health. In addition, many municipalities have just a few hundred residents, and about 150 villages and towns in the southern part of the province have fewer than 100 residents. For some rural, remote and small town communities, the slow slide to no longer being viable is clearly in sight.

This is not good news for either rural or urban Saskatchewan. Rural, remote and small towns play an integral role in the province's future economic growth, whether it is agricultural & agri-value, energy, forestry, life sciences & biomass, manufacturing or minerals. Aside from the economic arguments, rural Saskatchewan is an essential part of the cultural and political fabric of the province. Some of the key findings include:

- Despite rising fertility rates, net outmigration and low immigration rates have led Saskatchewan's share of the Canadian population to decline steadily during the past eighty years.
- Over the past eighty years the rural-urban composition of Saskatchewan has completely flipped, from 68% of residents living in rural areas in 1931 to 33% in 2011.
- Population projections for 2011-2025 indicate that Saskatchewan's rural population will continue to decline about 4% over the period.
- Younger working age adults are leaving rural areas and most are not returning. The prime working age population (those aged 20-44) declined by 8.5% between 2001 and 2011. It is expected that many of these younger working age adults left to pursue post secondary and employment opportunities in urban areas.
- Despite the increase in Saskatchewan's immigrant population (44.4%) over 2001-2011, approximately 85.9% reside in urban areas.

This study, *Fewer & Older: Population and Demographic Crossroads in Rural Saskatchewan*, is the third in a series of research reports related to the Strengthening Rural Canada initiative, a multi-year project funded by the Government of Canada's Adult Learning, Literacy and Essential Skills Program, as well as in part by the Roadmap for Canada's Official Languages 2013-18: Education, Immigration and Communities. This project is providing a comprehensive understanding of the relationship of human capital on both population and economic growth in rural, small town and remote communities in Canada. Working in twenty-eight rural communities in four provinces across Canada (British Columbia, Newfoundland & Labrador, Ontario and Saskatchewan), the project will purposefully

explore approaches and frameworks to support rural communities across Canada in building their own place-based strategic plans towards addressing the issues of human capital and economic growth.

The main objective of the present report is to analyze past, present and future demographic changes in the province of Saskatchewan. With 1.7 persons per square kilometer, Saskatchewan has one of the lowest population densities among Canadian provinces, second only to Newfoundland & Labrador. However, there are significant differences between various regions in Saskatchewan. For example, the density is as low as 0.1 in northern regions and less than 1.0 in 257 out of 297 rural municipalities. On the other hand, the density exceeds 3,000 persons per square kilometer in some residential areas in Saskatoon and Regina with a population of 222,189 and 193,100 in 2011 respectively.

The study focuses mainly on rural-urban demographics and examines how demographic changes have impacted four population groups, namely total provincial population, Francophone, Aboriginal and immigrant population. The study is organized into three parts:

Part I examines demographic change in the province of Saskatchewan. The focus is on four population groups, namely total, Francophone, Aboriginal and immigrant population. We also examine population trends in rural and urban regions in the province and pay special attention to the degree of rurality.

Part II examines demographic and socio-economic trends in rural and urban areas. This part also studies rural-urban earnings differential and investigates factors explaining the existing earnings gap between rural and urban regions. In Part II we define and estimate human capital indicators for rural and urban areas of the province during 2001-2011 and compare them to those for rural and urban Canada. The study finds that a significant part of the earnings gap between rural and urban regions is explained by differences in the human capital composition of their employed workforce. Part II also finds that the human capital indicators for Saskatchewan are below the national levels.

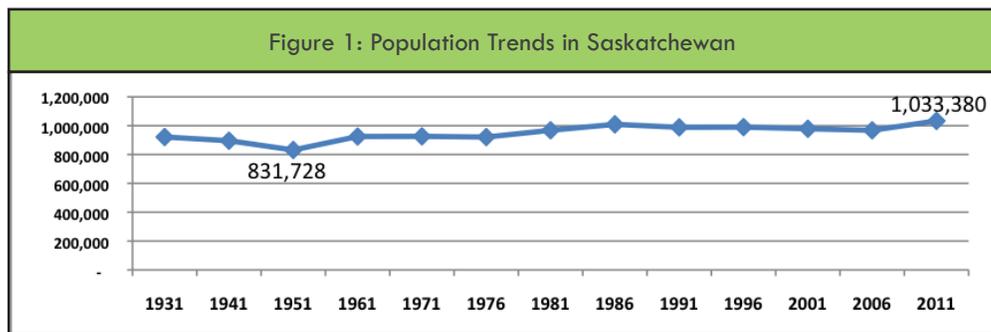
Part III makes projections of future rural and urban population trends in Saskatchewan. Using a demographic forecasting model, the report not only estimates future rural and urban population trends but also provides an age profile of those who have migrated to and from rural and urban areas. Part III shows that the urban population in Saskatchewan is expected to grow while the rural population is expected to decline during 2011-25.

The findings reveal that there are significant skilled labour shortages in rural and urban Saskatchewan. The skill shortage coexists with a relatively high unemployment rate in rural areas. In other words, there appears to be a mismatch between the existing skills and those required by a growing economy. The level and composition of the human capital in rural areas are significantly below those in urban regions. The study concludes that investment in human capital in rural areas can potentially remedy the existing labour shortage as well as the high unemployment and dependency rates in rural Saskatchewan.

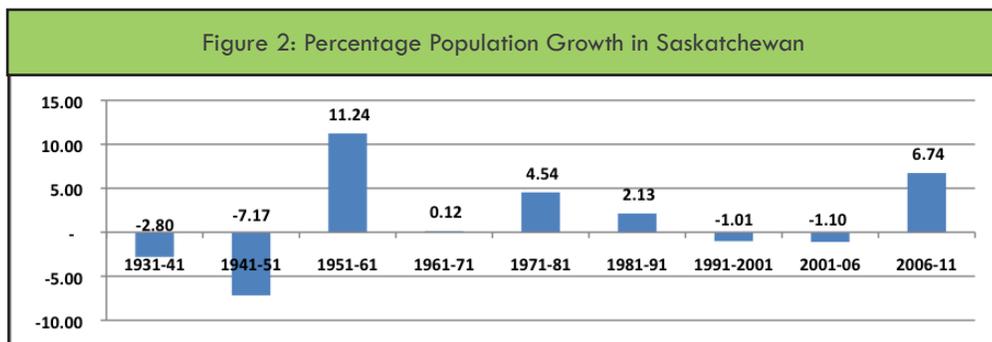
PART I: POPULATION TRENDS IN SASKATCHEWAN

The population of Saskatchewan has been effectively at or near one million people for the past eighty years (Figure 1). Despite its relative constancy, the population trend was not uniform during the 1931-2011 period. As Figure 2

shows, Saskatchewan's population declined during 1931-51, experienced growth during 1951-91 but declined slightly during 1991-2006 while experiencing significant growth during 2006-2011 due to record level investment and employment creation in the province during the latter period.



Saskatchewan's share of the Canadian population has declined steadily during the past eighty years. It declined from 8.9 percent in 1931 to 6.0 percent in 1951, 4.0 percent in 1981 and 3.0 percent in 2011.



The declining population share has happened despite the fact that the

total fertility rate in Saskatchewan has been significantly greater than the Canadian rate. The total fertility rate is defined as the average number of children that a woman will have over the course of her life. In Canada, the total fertility rate reached 3.94 in 1959. It declined below the generational replacement rate of 2.1 in 1972 and reached its historical low of 1.49 in 2000. It increased to a high of 1.68 in 2008, but declined to 1.61 in 2011. In Saskatchewan, the total fertility rate has consistently been above the Canadian rate and reached its recent high of 2.06 in 2009 but declined to 1.99 in 2011. The higher fertility rate in Saskatchewan compared to Canada

suggests that the declining population share in Saskatchewan is not due to natural population change. Examination of the data suggests that Saskatchewan has not only been experiencing net outmigration but has also been receiving disproportionately low immigration rates until recently.

The federal government sets the target levels of immigration in Canada. For example, the target level is set at 240,000 to 265,000 during 2013-2015. The target range has increased over the past 20 years and is presently about 0.75 percent of population each year.¹ According to Census data, about 1.4 million immigrants came to Canada during 2001-2011. About 43.8 percent of the new immigrants chose Ontario as their place of residence. Only about 3.3 percent selected Saskatchewan as their place of residence. Historically, Saskatchewan had one of the highest immigration rates in Canada during the first two decades of the 20th century. However, the Great Depression as well as recurrent drought and unfavorable economic conditions resulted in rural depopulation. The province became an unattractive destination for immigrants. Between 1931 and 1945, the province suffered from the lowest immigration rates to Canada in history. Additionally, by 2006, Saskatchewan registered one of the lowest immigrant retention rates in Canada (57%).

However, as Figure 3 shows, the number of immigrants to Saskatchewan increased sharply after 2006 due to improved economic conditions. Figure 3 also shows that Saskatchewan experienced out-migration up to 2007 when the net interprovincial migration turned positive. As a result, the province experienced population increase during 2006-2011.

Outmigration of youth along with rising life expectancy have resulted in aging of Saskatchewan's population. The baby boomers were followed by much smaller generations primarily due to a declining fertility rate. During the same period, average life expectancy at birth increased from 71.13 years in 1960 to 81.24 years in 2012.

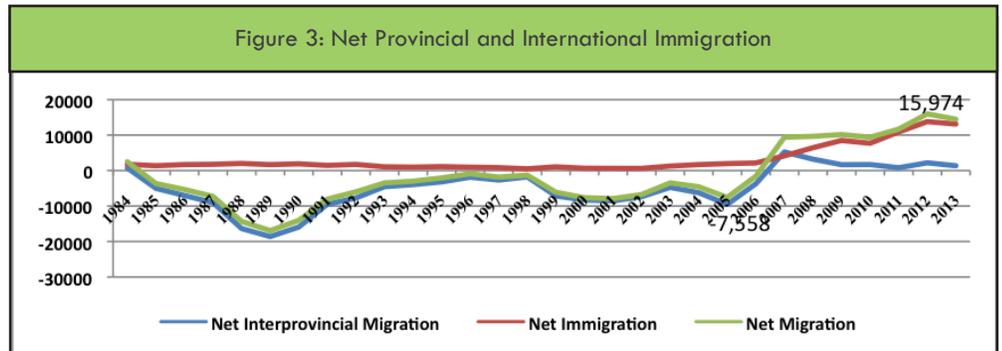
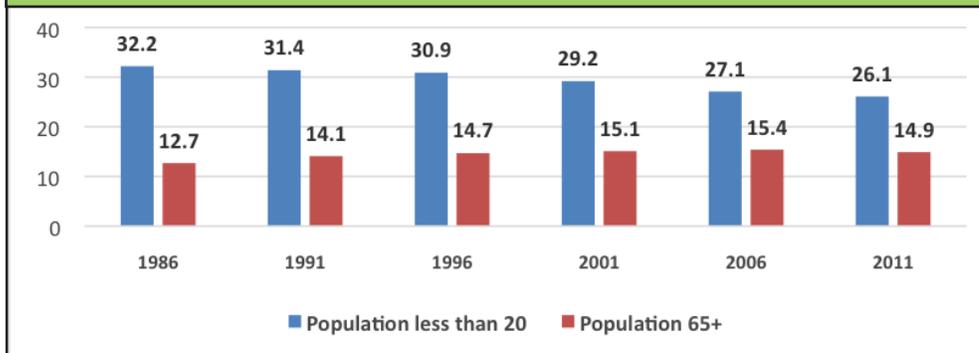


Figure 4: Changing Composition of Saskatchewan's Population



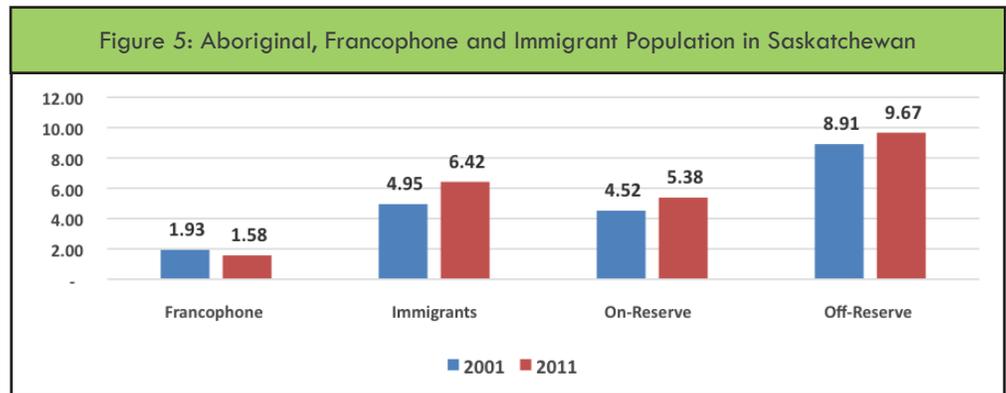
As a result, as is shown in Figure 4, the share of individuals below the age of 20 has declined from 32.2 percent in 1986 to 26.1 percent in 2011 while the share of seniors aged 65 years and over rose from 12.7 percent in 1986 to 14.9 percent in 2011. Aging of the population is also reflected in rising median age in Saskatchewan from 26.2 to 38.7 years over the last 30

years.² The median age is the age that divides a population into two numerically equal groups whereby half the people are younger than the median age and half are older.

Slower growth and aging of the population affect the labour force and hence Saskatchewan's ability to generate output and income. In fact, aging population affects virtually all other aspects of the economy too. It affects patterns of saving and household consumption and investment. It influences sales, production, and investment levels and its impact falls unevenly on different industries and sectors of the economy. Aging population also affects the tax bases from which the provincial government draws revenue and influences demand for government program expenditures such as health care. What healthcare related services will be necessary to meet the requirements of a rapidly aging provincial population? How many doctors, nurses and other type of healthcare providers do we need to train to replace the aging healthcare providers while satisfying the growing demand for healthcare services? How much of each type of services and facilities do we require? These are important questions that policy makers need to address in the coming years.

An important aspect of demographic change in Saskatchewan relates to the diversity of the population (Figure 5). The share of the Francophone population declined from 1.9 percent in 2001 to 1.6 percent in 2011. The share of the Aboriginal population increased from 13.4 percent to 15.0 percent during 2001-2011. Similarly, immigrants comprised 4.9 percent of the provincial population in 2001. Their share increased to 6.4 percent in 2011.

The share of the Aboriginal population living on reserves rose from 4.5 percent in 2001 to 5.4 percent in 2011. During the same period, the share of the Aboriginal population living off reserve increased from 8.9 percent in 2001 to 9.7 percent in 2011. The Aboriginal population is younger and has a higher fertility rate than the rest of the population. In addition, a higher percentage of them live in rural areas compared to other visible minorities.

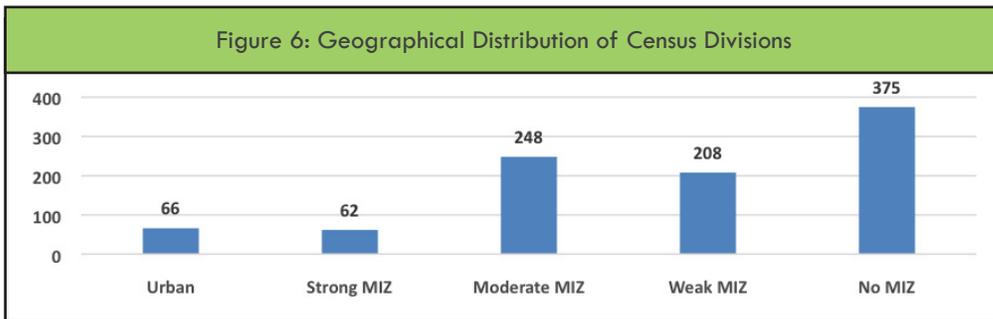


PART II: DEMOGRAPHIC + SOCIO-ECONOMIC TRENDS IN RURAL + URBAN SASKATCHEWAN

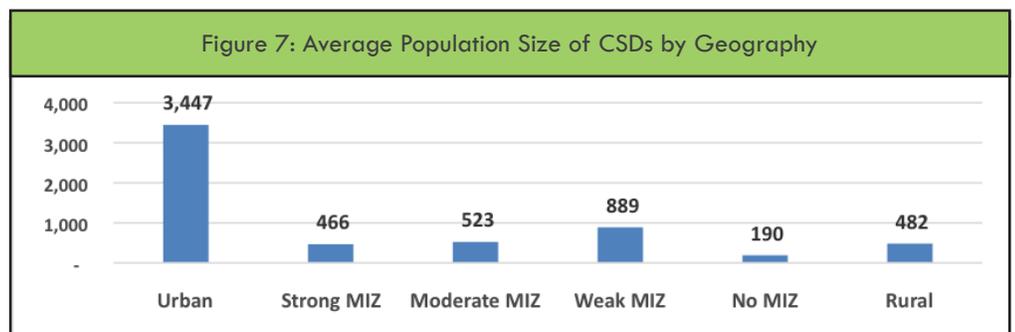
Part II of the study focuses on rural-urban demographics and examines how demographic changes have impacted four population groups, namely total provincial population, Francophone, Aboriginal and immigrant population.

The study uses detailed socio-economic information on all census sub-divisions (CSDs) in Saskatchewan obtained from 2001 and 2011 census custom tabulations. Using Statistics Canada’s Statistical Area Classification (SAC) system, the 959 CSDs in Saskatchewan can be classified into 41 Census Metropolitan Areas (CMAs) and 25 Census

Agglomerations (CAs) which are considered as urban areas and the other 893 CSDs are classified as rural and small towns with different degrees of rurality. Figure 6 shows the geographical distribution of 959 CSDs in Saskatchewan in 2011 specific to urban and rural and small towns with different degrees of rurality or metropolitan influenced zone (MIZ).



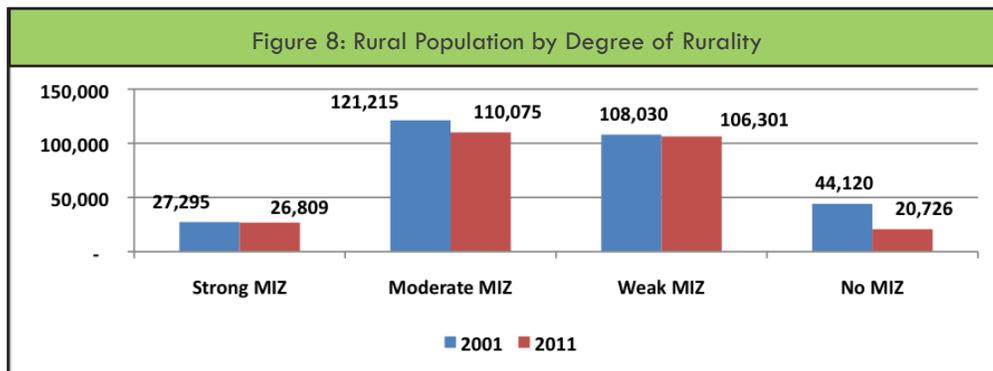
The population size of CSDs in Saskatchewan varies significantly from less than hundred to 193,100 and 222,189 in Regina and Saskatoon respectively. There are many municipalities with just a few hundred residents. About 150 of the villages and towns in southern Saskatchewan have fewer than 100 residents.



Using the SAC system, Figure 7 shows the average population size of various CSDs in Saskatchewan. We have excluded Regina and Saskatoon from calculating the average population sizes to prevent biasing the results due to a relatively large number of residents in those two communities. We have also excluded 56 smaller CSDs for which population data was not available. metropolitan influenced zones also experienced a slight population decline.

Figure 7 shows that, excluding the two major urban centers, the average number of residents in the remaining CSDs in urban regions are about 3,447 people. The average number of people living in CSDs declines considerably when we move to rural and small towns. Areas designated as having a weak link with urban centres appear to have a relatively larger population base (889 persons per CSD) whereas the remote regions have the lowest average number of residents (190 people in each CSD). Based on the above classification, 628,978 people lived in urban centres while 404,403 persons lived in rural Saskatchewan in 2011. The urban population increased by 12.9 percent while the rural population declined by 1.8 percent during 2001-2011.

During 2001-2011, the rural population declined both in absolute and relative terms. The share of the population living in rural and small towns declined from 56.4 percent in 2001 to 51.4 percent in 2011. Classifying rural and small towns according to their degree of rurality (Figure 8), one finds that the rural population has declined irrespective of the distance between rural and urban centres. However, the remote rural areas designated as zero metropolitan influenced zones have experienced the largest decline of about 53.0 percent followed by 9.2 percent decline in areas with a moderate link to metropolitan centres. Rural areas designated as strong and weak metropolitan influenced zones also experienced a slight population decline.



Saskatchewan is unique in a sense that it consists of many municipalities with a few hundred residents and many villages and towns with fewer than 100 residents. Statistics Canada often uses an alternative definition of rural population as persons living outside centres with a population of more than 1,000 and outside

areas with 400 persons per square kilometer. Figure 9 shows population trends in rural and urban Saskatchewan based on this alternative definition. Statistics Canada notes that prior to 1981, the rural population referred to populations outside centres of 1,000 population.

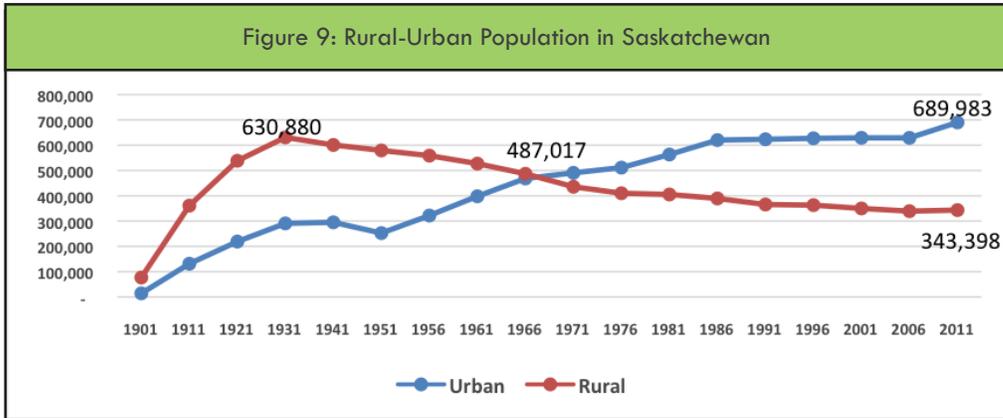
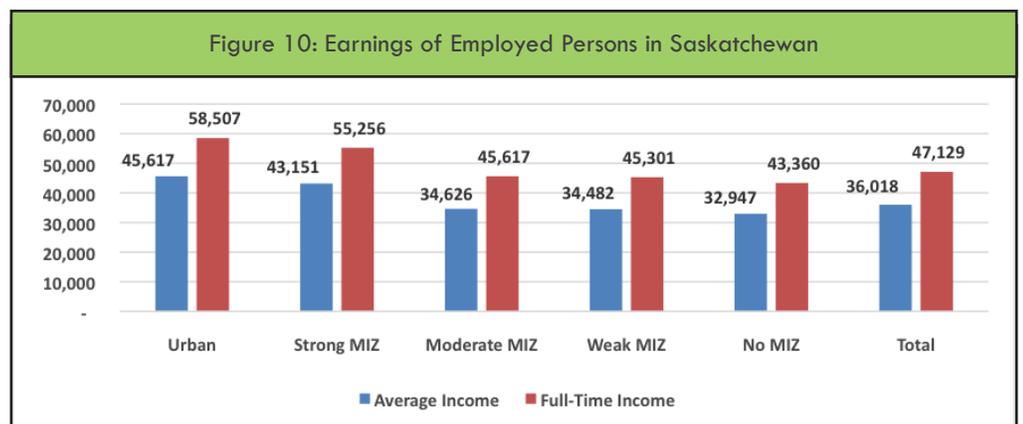


Figure 9 shows that the rural population in Saskatchewan has been trending downward since 1931. The share of the rural population has also been decreasing over time. It declined from 84.4 percent in 1901 to 69.6 percent in 1951 and 37.0 percent in 1991 to 33.2 percent in 2011. The changing relative size of the rural population is largely the

result of migration of population from rural to urban areas in search of employment, education and other opportunities. One of the forces behind the declining rural population has been a decline in farm numbers resulting from incorporation of smaller farms into larger units which coincided with an increased application of technology and substitution of capital for labour. The number of farms in Saskatchewan declined from 138,713 in 1941 to 50,598 in 2001.

The study also examines various socio-economic characteristics of rural and urban population in Saskatchewan and pays special attention to the degree of rurality. The study finds that the labour force participation rate is highest in urban areas and declines as the degree of rurality rises. The unemployment rate is lowest in urban areas (6.6%) and increases as the degree of rurality rises. The unemployment rate in remote rural regions in 2011 was about 12.6 percent higher than the prevailing rate in urban centres. This picture does not change when one defines rural areas as those with less than 1,000 or fewer population.

In terms of dependency on government transfer payments, the study finds that an average of 5.5 percent of individuals in urban areas receive transfer payments. The dependency rate increases to 7.2 percent in rural areas with a strong link to urban centres and to 10.1 percent in remote rural regions. In other words, the dependency rate in remote areas of the province is about 2.0 times greater than that in urban regions.



The average earnings in remote areas is about 72.2 percent of earnings in urban regions (Figure 10). The earnings of those who worked full-time and full-year equalled \$58,507 in urban centres compared to \$55,256 in rural areas with a strong link to urban centres, \$45,617 in those with a moderate link, \$45,301 in relatively remote regions and \$43,360 in remote rural areas. It appears that earnings decline as the degree of rurality rises.

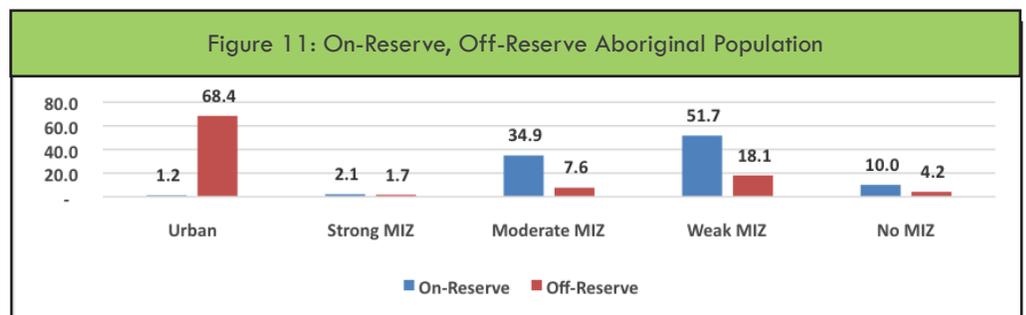
Focusing on various population groups, the study finds that the average age of the Francophone population was about 53.9 years in 2011 compared to 37.9 years for the provincial population. Similarly, the median age in Saskatchewan equalled 37.8 years compared to the median age of the Francophone population that was 56.9 years in 2011. It appears that the Francophone population is much older than the overall provincial population. This can be the result of a low fertility rate among the Francophone population or caused by the outmigration of Francophone youth from the province. The study finds that the majority or 56.6 percent of the Francophone population live in urban areas. About 35.9 percent live in rural areas with weak to strong link with urban centres. Only 7.5 percent live in remote rural communities.

Focusing on the Aboriginal population, the study finds that the on-reserve population has increased by 27.1 percent during 2001-2011. During the same period, the off-reserve Aboriginal population increased by 18.4 percent. Overall, the total Aboriginal population increased from 130,029 in 2001 to 157,740 in 2011, a growth rate of about 22.6 percent. The study discusses various factors explaining the significant growth of the Aboriginal population in the province.

The Aboriginal population is much younger than the overall population. The median age of the Aboriginal population equals 22.6 compared to the provincial median of 37.7. In other words the Aboriginal population is on average about 15 years younger than the overall population

in Saskatchewan. The study also shows that the on-reserve population is slightly younger than the off-reserve population. This can reflect a higher fertility rate for the on-reserve population compared to the off-reserve population.

About 44.4 percent of the Aboriginal population live in urban areas. The rest live in rural and small towns in Saskatchewan. About 36.4 percent of the Aboriginal population live in rural and small towns with a weak



or no link to urban centres. The geographical distribution of the Aboriginal population changes when one focuses on CSDs with less than 1,000 population. In this case, the majority or 93.1 percent of the population reside in rural areas with moderate to no link to urban centres.

Focussing on the Aboriginal population living in rural and small town Saskatchewan, the majority or 68.4 percent of the off-reserve Aboriginal population live in urban areas (Figure 11). About 7.6 percent live in rural areas with a moderate link to urban centres and 18.1 percent live in rural regions with a weak link to urban centres. The majority or 51.7 percent of the on-reserve population live in rural areas with a weak link to urban centres. Another 34.9 percent live in rural areas with a moderate link to urban regions. Finally, about 10.0 percent of the on-reserve Aboriginal population live in remote areas with no link to urban centres.

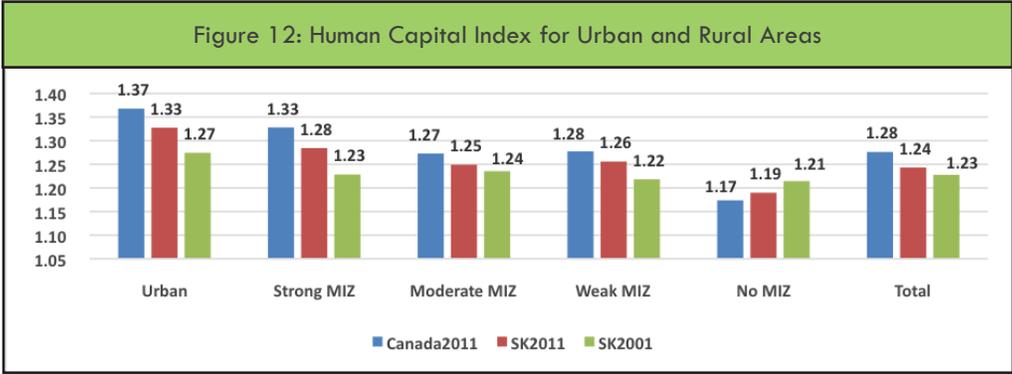
Turning attention to the immigrant population, the study finds that the immigrant population has increased by about 44.4 percent during 2001-2011. This amounts to a growth rate of 4.4 percent per year. It appears that the province has experienced significant in-migration of young immigrants during 2001-2011. As a result, the average age of immigrants declined from 52.0 years in 2001 to 42.4 years in 2011. The median age of the immigrant population has also declined from 52.4 years in 2001 to 41.6 years in 2011. Despite the significant influx of young immigrants, the immigrant population in Saskatchewan is still much older than the general population. As mentioned above, the average and median age of the general population in Saskatchewan in 2011 equalled 36.5 and 36.4 years respectively.

The study finds that the majority or 85.9 percent of the immigrant population reside in urban areas. Only 7.4 percent of them live in areas designated as weak MIZ and 4.0 percent live in areas with moderate link to urban areas.

Part II of the study also examines factors explaining the earnings differences between rural and urban regions. There are at least two competing explanations for the observed earnings gap. One relates the earnings gap to the differences in human capital composition in rural and urban regions. The other relates the earnings gap to the presence of agglomeration economies resulting from the concentration of workers and proximity of firms in larger urban areas. The study also examines the effect of differences in industrial and occupational composition of the employed labour force in different regions.

To examine factors explaining the rural-urban earnings gap, the study estimates human capital indexes for rural and urban regions in Saskatchewan and compares them with those in Canada (Figure 12).

The human capital index for Saskatchewan rose during 2001-2011 due to an in-migration of skilled workers from other regions. Overall, the human capital index for Saskatchewan has been below the national level. The study also finds that a significant share of the earnings gap between rural

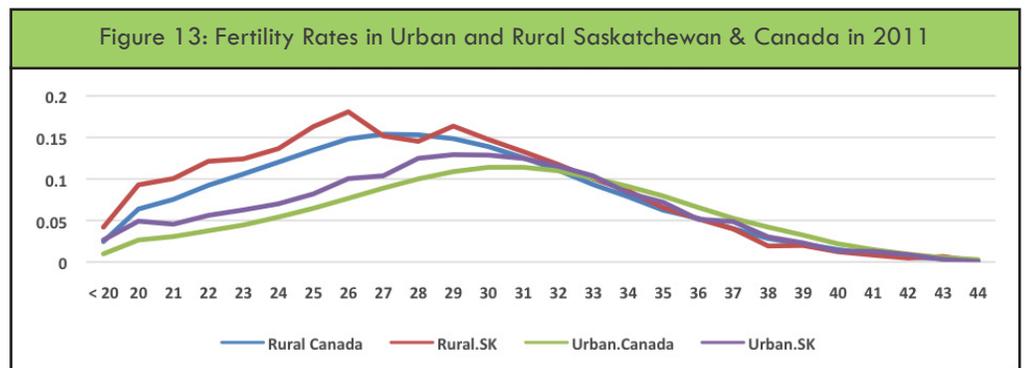


and urban regions is explained by the differences between their stock of human capital. In addition, industrial and occupational differences also explained a part of the earnings gap in Saskatchewan.

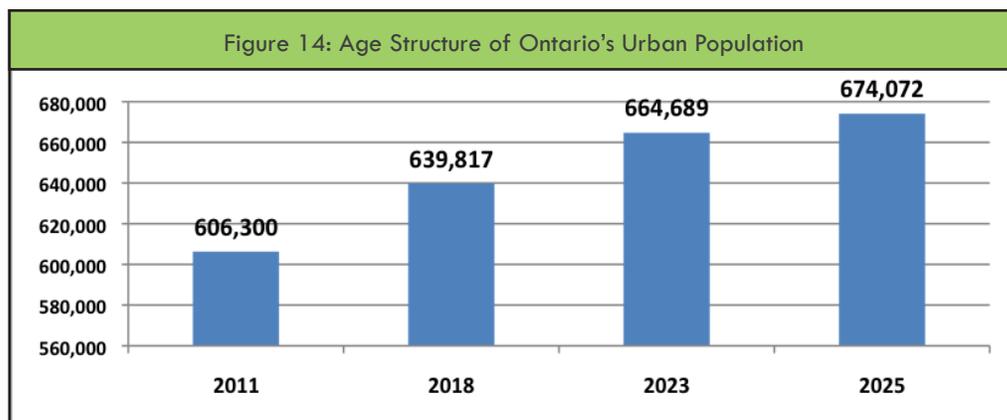
PART III: POPULATION PROJECTION FOR RURAL + URBAN SASKATCHEWAN

Part III of the report makes projections of the rural and urban population from the base year of 2011 to 2025. The study shows that the total fertility rates in urban and rural Saskatchewan equal 1.78 and 2.40 compared to 1.54 and 2.11 in Canada, respectively (Figure 13). Overall, the total fertility rate in the province equaled 1.99 in 2011 which is significantly greater than the national average of 1.62.

Assuming that the 2001-2011 demographic trends will continue into the future, the province's urban population is expected to rise from 606,300 in 2011 to 639,817 in 2018 and 674,072 in 2025 (Figure 14).

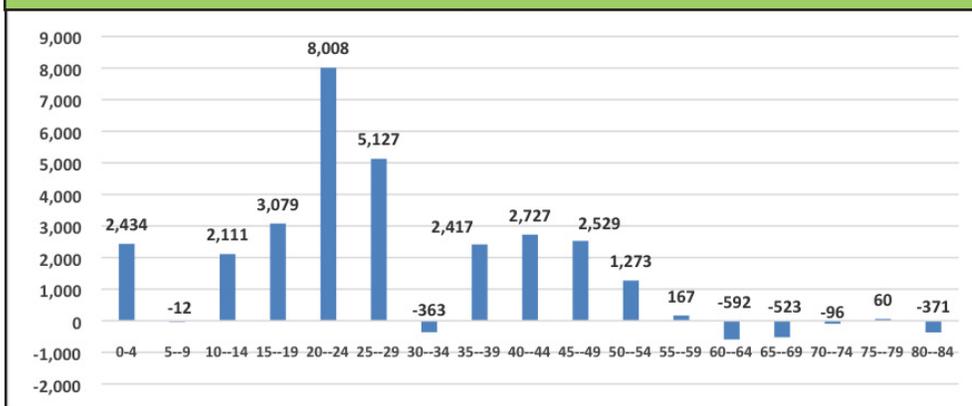


The growing population trend in Saskatchewan is primarily due to a significant net in-migration that urban areas have been experiencing (Figure 15). The report shows that urban areas experienced significant net inflow of people in almost all age categories during 2001-2011. The newcomers came from other provinces, rural areas and other countries. Overall, the province experienced a net inflow of about 19,672 people during 2001-2011.



The province's rural population declined from 415,370 in 2001 to 412,020 in 2011, a decline of about 0.81 percent during 2001-2011. This is in contrast to the total urban population that grew about 10.7 percent and the provincial population that grew about 5.7 percent during the same period. The study shows that the 2001-2011 trend is expected to continue into the future (Figure 16).

Figure 15: Net Migration Flows to Urban Regions



How much of the rural population decline is caused by out-migration? The study estimates the migration flows during 2001-2011 (Figure 17). It appears that out-migration of youth between the ages of 20 and 30 has played a significant role in the declining rural population in Saskatchewan.

Figure 16: Future Rural Population Trend

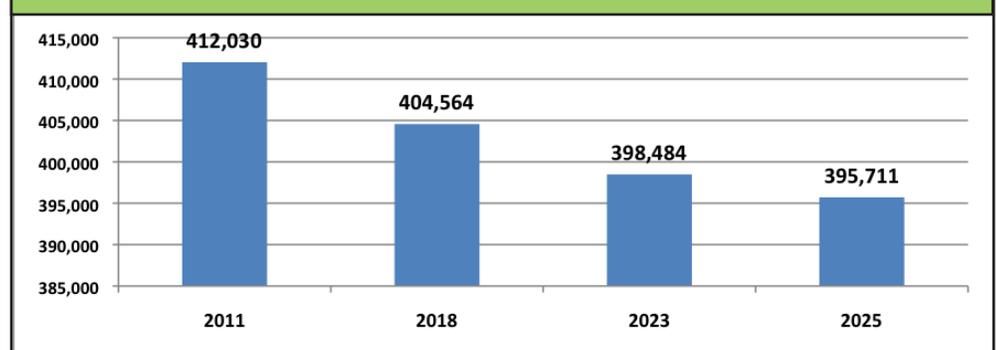
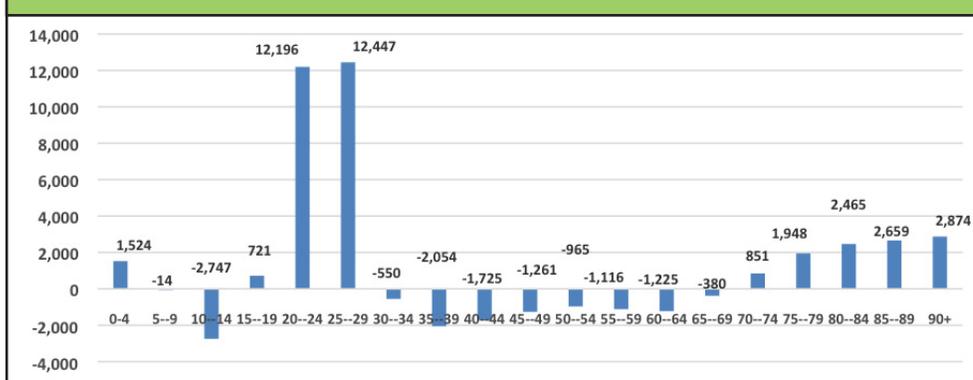


Figure 17: Future Rural Population Trend



CONCLUSION

The study finds that the urban population in Saskatchewan has been rising due to significant economic growth and investment in recent years. Recent resource-related developments have created favorable economic conditions attracting youth from rural areas as well as other provinces and countries. On the other hand, the rural population has been declining due to out-migration of youth. In fact, out-migration of youth has been a reality in rural areas for some time. Out-migration of youth reduces the ability of rural areas to stay vibrant and economically viable. It also decreases the capacity of the local population to support local businesses. In fact, the study shows that the stock of human capital declines as one moves towards more rural areas. Recent studies have shown that the lack of human resources represent the greatest challenge to rural development in Canada. In fact, multinational and multi-locational firms in Canada have difficulty finding qualified workers in rural areas.³

Lack of qualified workers creates a significant obstacle for any economic development initiative in rural as well as urban regions. Rural and urban areas are experiencing a high unemployment rate along with growing demand for qualified labour. This suggests a potential skills mismatch between labour supply and demand. In fact, minimum formal skills requirements in the agriculture industry has resulted in relatively low stock of human capital in rural areas. According to the 2011 National Household Survey, about 30.0 percent of individuals between the ages of 15 and 64 in rural Saskatchewan do not have a high school diploma compared to the national average of about 17.0 percent.

The study shows that youth out-migration from rural areas has been a significant factor explaining the declining rural population. This will continue as long as no sustainable economic opportunity exists in those areas. The present mismatch between demand and supply of skills in rural as well as urban areas suggests that investment in human capital may provide one potentially viable long-term solution to the present labour market challenges rural and urban areas are facing in Saskatchewan.

ENDNOTES

¹ Ministry of Finance, *Ontario Population Projections Update 2012-2036*, Spring 2013.

² Crosby Hanna & Associates, *Saskatchewan Health Region Population Projections (2006-2026)*, June 2010, p. 27.

³ For example see B. Moazzami, *Multi-national and Multi-locational Enterprise Initiative: Survey of Northern Ontario Companies and Analysis of the Results*, prepared for Federal Economic Development Initiative for Northern Ontario (FedNor), March 2012.

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