Functional Economic Areas of the Canadian Prairie Region

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ACRONYMS

CSC	Complete Shopping Centre
CSD	Census Subdivision
FCC	Full Convenience Centre
FEA	Functional Economic Area
LMA	Labour Market Area
MCC	Minimum Convenience Centre
PSC	Partial Shopping Centre
PWR	Primary Wholesale Retail
RM	Rural Municipality
SWR	Secondary Wholesale Retail

CHAPTER ONE: BACKGROUND

Most small-area political-administrative subdivisions are much too small to be considered economic regions either for purposes of analysis or planning. In recognition of this, researchers began to attempt to objectively define functionally based micro-regions as early as the 1960s. A variety of regionalization schemes derived from behavioural patterns were proposed (Berry 1961, 1968; Fox and Kumar 1965; Spense 1968; and Ray 1969). Retail market areas, defined around locally dominant communities in regional central place hierarchies, and labour market commuting areas were both advocated. In an imaginative empirical analysis, Fox and Kumar (1965) combined trade and labour market areas to form what they designated Functional Economic Areas. Assuming that most people are unwilling to spend more than an hour (one way) commuting to work, they used 50-mile radii around centres in the top three levels of the central place hierarchy in Iowa to describe areas from which labour would be drawn. The areas within the LMAs were found to have experienced greater population growth between 1950 and 1960 than parts of the state that were not included in any LMA.

Commuting patterns have also formed the basis for assessing the influence of metropolitan areas on surrounding rural areas in a number of studies. Berry (1970) developed commuting maps for major centres in the United States, based on journey-to-work information from the 1960 Census, to show the gradient of urban influence on surrounding areas. Berry suggested that commuting to centres of employment is the correct development strategy for some rural residents, while others may resort to migration in order to participate in urban growth. He also found that the amplitude of the gradients of urban influence was directly related to the rank of the centre in the urban hierarchy and that a "threshold size" of 40,000 to 50,000 population in the centres had to exist at that time before any significant influence occurred.

Mitchelson and Fisher constructed zero-,5-, and 10-percent commuting isolines for each of Georgia's major employment centres (13 in 1960; 20 in 1970 and 1980) (Mitchelson and Fisher 1981; 1987a). They found that most nonmetropolitan growth in Georgia was associated with an intensification of metropolitan commuting fields. The greatest extensions over time came in the 10-percent isolines with Atlanta, the largest centre, having the largest commuting area. In a similar study in the state of New York, they found that the maximum extent of commuting fields was 50-60 miles; they suggest this defines the extent of the potential for rural areas to benefit from metro growth (Mitchelson and Fisher 1987b).

Continuing in the central-place-oriented tradition, Parr (1987) combined the hierarchical structure with commuting to obtain a more realistic portrayal of the urban system. Parr argues that commuting is unlikely between the higher levels of the hierarchy due to the relatively large distances involved and that higher level centres are likely to experience net in-commuting while lower levels experience net out-commuting.

The 1980 and 1990 U.S., and the 1981 and 1991 Canadian, censuses collected detailed journey-to-work data, which facilitated the systematic identification of labour market areas over extensive geographic regions. Using the U.S. data, Tolbert and Killian (1987) delineated 382 labour market areas (LMAs) for the United States. Their procedure involved combining contiguous counties that encompassed both place of work and place of residence upon the relative strength of the commuting ties between each pair of locations. Unfortunately, minimum-sized units that were individually identified contained at least 100,000 inhabitants because of the U.S. Census Bureau's confidentiality requirements. In the eastern U. S. where population densities are high, this was not a serious constraint. Counties that are geographically very small,

but with larger populations, were combined to form LMAs that are much more realistic economic units than the individual counties. In the west, however, where counties are larger but population densities are much lower, several counties had to be combined to include 100,000 residents. The result was the creation of LMAs that are unrealistically large. All of Nevada, for example, is included in two LMAs; Utah is covered by four. These aggregations are much too large for any realistic assessment of regional rural-urban linkages.

In a subsequent study, Killian and Hady (1988) combined their LMAs by grouping them according to the functional taxonomy developed initially by Bender et al (1985), which classifies counties according to their economic base. Conceptually, this provided a more focussed analysis in that it grouped meaningful geographic units (LMAs) according to the type of functional economic base that supported them. In practice, however, the minimum-sized aggregations (100,000) still produced units that are too large for many planning and policy purposes, especially in the western U.S. Further, since all counties were incorporated into some LMA, assignment (or exclusion) based upon systematic criteria, which distinguished intensity of interaction, was apparently precluded.

Fortunately, Statistics Canada data are available at the Census Subdivision (CSD) level which permits the identification of commuters at a very microlevel: city, town, village, township, or rural municipality (RM). Using Statistics Canada data, Stabler, Olfert and Greuel (1996) developed labour market areas for Saskatchewan for two points in time–1981 and 1991. For the study of labour markets in Saskatchewan, the 62 urban centres in the top four functional categories of the 1990 central place hierarchy were pre-selected as potential focal points. As it turned out, however, communities in the Partial Shopping Centre classification were generally

too small to form meaningful LMAs. Often, at this level, the community's only attachment was with the Rural Municipality (RM) in which it was situated. As might be anticipated, the largest LMAs, in terms of commuters, were those formed around Saskatoon and Regina. Since these two cities have by far the highest concentrations of employment, they draw on extensive geographic areas to satisfy their labour requirements. The radii of the circles described around Saskatoon and Regina at which commuting fell below five percent of the resident labour force was about 65 kms. (40 miles) in both years. With a road system built on a square grid, this translates into a driving distance of approximately 90 kms. (55 miles). For SWR centres, radii were about 43 kms (26 miles) and for CSCs, 36 kms. (22 miles).

Geographically, there was considerable stability in the pattern of LMAs between 1981 and 1991. There was, however, an increase in the percentage of the provincial labour force commuting over the decade, from 16.1 to 17.7 percent of the total labour force. The largest communities accounted for most of the increase in commuters with Saskatoon and Regina capturing 56 percent of the increase.

For the present study, Statistics Canada data for 1996 is utilized to develop LMAs for each of the three Prairie provinces. The methodology employed is the same used in the previous study of LMAs in Saskatchewan.

In Chapter Two data sources and methodology are described. In Chapters Three through Five LMAs are developed for each province and combined with retail shopping market areas to produce Functional Economic Areas (FEAs) for each province. Conclusions follow in Chapter Six.

CHAPTER TWO: DATA AND METHODOLOGY: LABOUR MARKETS, RETAIL TRADE AREAS, MULTIPLIERS AND FUNCTIONAL ECONOMIC AREAS

Labour Market Areas

A labour market area may be defined as an area that is large enough to contain the workplaces of most of the people who reside within it and the residences of most of the people who work within it. For larger centres the majority of the workforce, in percentage terms, will be composed of local residents. Nevertheless, major centres provide a large absolute number of jobs for rural dwellers, and their influence extends farthest into rural space. Such centres are the "focal points" of their labour market areas. For small communities in-commuters may make up half or more of the centre's workforce, but the absolute number of jobs provided per community is smaller than in the case of large communities. Taken altogether, however, the SWR and CSC communities provided approximately as many jobs for rural commuters as did Saskatoon and Regina combined in the 1981 and 1991 studies of Saskatchewan LMAs previously referred to.

Data

Data from the census on place-of-work and place-of-residence for each of the three Prairie provinces were acquired from Statistics Canada through special tabulations of Census Sub Divisions (CSD) files. Commuters are identified as those whose place-of-work address is different from their CSD residence address. Since the number of CSDs is very large (900 plus for Saskatchewan) aggregation was necessary.

The first step in aggregating the data involved grouping the CSDs into somewhat larger, but still micro-level, geographical units such as existing rural municipalities in Saskatchewan and Manitoba and the old system of rural municipalities in Alberta (since replaced with counties

and improvement districts). Other geographic entities such as unorganized districts were treated, for statistical purposes, as RMs or counties. Second, potential focal points were identified by utilizing all of the communities in the top three functional categories identified in the accompanying trade centre hierarchy analyses. Some PSCs were also utilized as potential focal points in remote geographies distant from a community of CSC or higher status.

Next a frequency matrix was constructed for each province whose dimensions are: number of potential focal points x number of rural geographies x 2. This array will identify the absolute number of commuters from rural portions of each rural geography to each potential focal point and from each potential focal point to rural portions of each rural geography. Rural to rural commutes are identified by a process defined later.

Methodology

Each rural geography is "attached" to one of the potential focal points based on the strength of the commuting flows. The formula used to measure the strength of the labour market interaction is:

$$P_{R_i C_j} = P_{C_j R_i} = \frac{commuters\ from\ rural\ to\ urban\ plus\ commuters\ from\ urban\ to\ rural}{resident\ labour\ force\ of\ the\ smaller\ of\ (rural\ geography\ or\ urban\ centre)}$$

The numerator represents the sum of the two-way flows. The denominator is the resident labour force of the smaller of the two entities. Structured in this way, the formula emphasizes the importance to rural areas of the labour market interactions with the urban employment centre. It also defines the urban centre's tributary rural areas.

If all the rural geographies could be unambiguously attached to only one of the potential focal points, the number of unique LMAs would be equal to the number of potential focal points. In some cases, however, commuting patterns are sufficiently complex (for rural geographies

situated near to or between adjacent urban centres) that unequivocal assignment is not possible. To resolve the assignment, a factor analysis program is used to "pair" urban centres that share commuters in a substantial way. To facilitate pairing, the previously created matrix is replaced by one in which the absolute number of commuters (in the cells) is replaced by the P[R(j)C(i)] values. Urban centres that interact with the same rural space are thus paired creating a single, composite focal point where two (or more) had been hypothesized. Through this process the number of focal points will be reduced from the number initially hypothesized to a smaller number of more or less unique focal points.

The final step in defining the spatial structure of LMAs is achieved by using a cluster analysis program to assign rural geographies to the set of (composite) focal points. The cluster algorithm will assign rural geographies to focal points based upon the strength of the commuting flows. Clusters are formed by creating successively larger groups, beginning with those entities most closely associated. This process will continue until it is no longer possible to form additional linkages. At this point most rural geographies will be assigned to one of the composite focal points. Some isolated rural geographies, those with little or no association with one of the focal points, will form a "residual" cluster.

At this point statistical profiles of the LMAs can be compiled based on rural to urban and urban to rural commutes within the resulting LMAs. Rural to rural commuting can be added for completeness at this juncture by creating a matrix whose dimensions are: number of rural geographies within the LMA x number of rural geographies in the province x 2.

The LMAs thus created become building blocks, along with retail shopping market areas and local multipliers which are used to form Functional Economic Areas.

Shopping Patterns

Shopping patterns identify where the province's residents obtain goods and services purchased at retail and can be expanded to include common public services. Shopping areas and labour markets are similar in that they both define spheres of spatial interaction. They differ in that journeys-to-work are usually made daily while shopping trips are made less frequently.

Trade and service functions are also defined by demand thresholds which are associated with population size within the relevant market area. The population required to support a gasoline service station is small. Thus, they are numerous and relatively closely spaced. The population required to support a big-box retail outlet like Wal-Mart, on the other hand, is much larger. There are, therefore, many fewer outlets, and they are spaced at much greater intervals. As a result, it is more appropriate to think of an hierarchy of market areas, each defined by clusters of functions with similar demand thresholds. Markets for good and services with lower market thresholds will be spatially nestled within those for goods and services with higher demand thresholds. Consequently, retail trade areas, particularly for larger centres, are typically larger than labour market areas.

A complete shopping pattern study for Saskatchewan was completed in 1991. At that time a pattern had emerged in which common everyday goods and services such as elementary schools, high schools, gasoline, routine banking, and groceries were obtained in the the vicinity of the rural dwellers' residence. Goods and services provided by middle and higher order functions were purchased in either the larger regional centres or in the province's major cities.

Geographically, the shopping patterns of rural dwellers living near Minimum Convenience Centres was three-tiered: 28 percent of consumption expenditures were made in

MCCs, 13 percent in PSCs, and 45 percent in one of the 10 largest centres (SWR and PWR). For people living elsewhere, the pattern was two-tiered with a rising percentage of consumption expenditures made in the community of residence (with ascending trade centre status of the home community) and the balance in one of the 10 major centres. Bypassing of opportunities to purchase, en route to higher level centres, was common and occurred at all lower and intermediate levels in the hierarchy (Stabler and Olfert 1992).

The estimated radii of retail market areas defined by rural dwellers' 1991 shopping patterns are recorded in Table 1. Though the distances recorded for shopping trips in 1991 are undoubtably still relatively representative, several changes in the trade centre hierarchy will have modified the detail. For example, there are many fewer communities classified as PSC and FCC and many more classified as MCCs in 2001. Theoretically this would lead to a modest reduction

Table 1: Distances Travelled by Rural Dwellers to Shop by Functional Classification of Centre, 1991

Functional Classification	Average Distance (kms)
MCC	17
FCC	26
PSC	39
CSC	50
SWR	80
PWR	141

of the market areas of the MCCs and a modest expansion of the market areas of FCCs and PSCs. In addition, Wal Mart and other super stores had not yet arrived on the Saskatchewan scene in great numbers in 1991. Wal Mart's appearance in PWR and SWR communities, along with the

expansion of other big box retailers in the same centres, has undoubtably extended the market areas of the 10 centres in these two top categories.

We are unaware of any shopping market area surveys for either Alberta or Manitoba. Thus the 1991 retail market areas established for Saskatchewan are used to approximate market areas in all three Prairie provinces in creating Functional Economic Areas.

The Local Multiplier

Shopping market surveys, combined with provincial income and product accounts, make possible the estimation of local multipliers.

The multiplier refers to the change in the total income which results from an increase in some autonomous expenditure.[1] The portion of the initial increase in autonomous expenditure which is paid to local factor (land, labour, capital) owners, leads to an even greater expansion of local income as the initial income is spent and re-spent. The process comes to an end when "leakages" from the spending stream, in the form of saving, taxes and imports, reduce to zero the increments in the flow of spending and re-spending. While saving rates and taxes will not vary much from place to place within a province, the same cannot be said of imports which, in this context, would include any purchases by local businesses or investors from a wholesaler or other supplier located elsewhere in the province or beyond.

Community-level multipliers for Saskatchewan were estimated in two studies (Olfert and Stabler 1994; Olfert and Stabler 1999). In the first of these studies, community level multipliers

[1]Autonomous expenditures are those which are considered to be independent of the level of current income. Thus, from a pre-project perspective, local investment expenditures made during the construction phase of a new factory, for example, as well as locally earned wages, rents, interest, and profits paid during both construction and operation of the factory would be considered autonomous. Wages, rents, interest, and profits are referred to as factor payments. The sum of these payments is also referred to as value-added.

were estimated for each of the six functional levels in the trade centre hierarchy. These *own-community* multipliers identified the total local increase in expenditures, at each hierarchical level, occasioned by an autonomous increase in demand at that specific level.

The multiplier analysis was extended in the second study by estimating *cross-community*, *system-wide* (trade centre), and *level-specific* multipliers. Cross-community refers to the impact on community B as the result of an autonomous expenditure increase initiated in community A; system-wide refers to the sum of the own-community plus all cross-community induced effects. The level-specific multiplier is the sum of the own-community multiplier at a given level plus the cross-community impact at that level resulting from out-shopping from lower levels.

The multipliers just discussed are identified in Table 2. The entries on the diagonal in Table 2—1.0951, 1.1762, etc. are the own-community multipliers. For example, each $100 of new autonomous expenditure (in value-added terms) at the FCC level, will lead to a total increase in income at the FCC level of $117.62—the initial $100 plus $17.62 of induced spending. The multipliers are larger at successively higher levels in the trade centre system because the leakages in the form of imports diminishes.

The cross-community multiplier effects are shown as the off-diagonal entries such as 0.0242, 0.0551, etc. in the case of MCCs. These are interpreted as follows: for each $100 new autonomous (value-added) expenditure at the MCC level there will be an induced increase in spending of $9.51 at the MCC level; $2.42 at the FCC level, $5.51 at PSC; $3.35 at CSC; $10.27 at SWR; and $13.28 at the PWR level.

Table 2: Own- and Cross-Community, System-Wide, and Level-Specific Impact Multipliers in the Trade Centre Hierarchy

Spending Origin	Impact Level						
	MCC	FCC	PSC	CSC	SWR	PWR	System-wide (row total)
MCC	1.0951	0.0242	0.0551	0.0335	0.1027	0.1328	1.4434
FCC		1.1762	0.0242	0.0262	0.0794	0.1374	1.4434
PSC			1.2502	0.0191	0.0584	0.1157	1.4434
CSC				1.3349	0.0122	0.0964	1.4434
SWR					1.3818	0.0616	1.4434
PWR						1.4434	1.4434
Level-specifc (col. total)	1.0951	1.2004	1.3295	1.4137	1.6345	1.9873	

The row totals represent the system-wide multipliers and are identical (1.4434) regardless of where in the trade centre hierarchy the expenditure originates, i.e., the distribution of the impacts (over trade centre levels) differs depending on the origin but not the total system-wide impact.

Column totals represent, for each level, the sum of cross- plus own-community multiplier effects. For example, a $100 expenditure at each level in the system simultaneously will translate into an impact of only $109.51 at the MCC level but will rise to $198.73 at the PWR level. These column totals are the level-specific multipliers.

The pattern of the multiplier effects is informative of the economic development effects of new expenditures at any level. In particular it is apparent that the induced effects that follow from an autonomous (value-added) expenditure increase at the MCC or FCC levels is greater at

the top of the hierarchy, in the SWR plus PWR levels, than at the level where the expenditure was actually initiated.

The pattern of small cross-community multipliers up through the CSC level also confirms the habit of rural dwellers to bypass intermediate-level centres as the population in and surrounding lower level centres travel to communities at the top of the hierarchy to shop for items not available, or not purchased, in their home community.

The striking conclusion of these observations is that a new factory or intensive livestock operation situated in, or near to, an MCC level community will actually produce a greater induced final demand impact in the SWR and PWR cities than in the rural economy.

The distribution of induced impacts between urban (defined in this instance as SWR and PWR centres) and rural space (all other centres), following an autonomous (value-added) expenditure increase in one of the four lowest levels in the hierarchy is shown in Table 3. From this table it is apparent that only investments at, or near, PSC or CSC communities capture a significant majority of the induced impacts in rural places.

Table 3: Distribution of Induced Effects (Urban=SWR +PWR) of an Autonomous Expenditure Increase

Expenditure Originating at:	Rural Impact	Urban Impact	% of Impact in Rural
MCC	0.2079	0.2355	46.88
FCC	0.2266	0.2168	51.11
PSC	0.2693	0.1741	60.73
CSC	0.3348	0.1086	75.51

With information on commuting-to-work patterns, retail shopping patterns and the multiplier effects of expenditures initiated at each level in the hierarchy, it is possible to construct Functional Economic Areas (FEAs).

Functional Economic Areas

Functional Economic Areas are optimally defined by combining both commuting and shopping patterns. This approach integrates the influence of employment centres as places of work as well as the importance of the community in providing retail trade and services to its own and the surrounding population. The definition of an FEA captures these two types of spatial interaction and elaborates on them

A Functional Economic Area (FEA) is an area that is relatively closed or bounded with respect to the income-producing activities of its residents. It is also relatively closed with respect to a cluster of everyday consumer-oriented business outlets and common public services. Almost all the labour resident in the area is employed within the area and most of the everyday goods and services consumed in the area are purchased within its boundaries. Similarly most of the K-12 student population living in the area attends school within the area and most of its residents obtain routine health and medical care within the area.

Identification of FEAs is a three step process: first, labour market areas are defined and their boundaries identified based upon labour commutes to employment centres; second, retail trade areas are superimposed over the labour market areas which assists in assigning RMs on the boundary of two labour markets to one area or the other and assigning rural space not included in any LMA to an FEA. Finally, some minor adjustments are made to account for physical features such as rivers and road networks, or to reduce irregularities in the shapes of the FEAs. Through

this process, a system of FEAs is defined for each province based on its larger communities and including the rural space tributary to these centres for employment, shopping and public service. Labour Market Areas and Functional Economic Areas are defined for each of the Prairie provinces in the next three chapters.

CHAPTER THREE: LABOUR MARKETS, RETAIL TRADE AREAS, AND FUNCTIONAL ECONOMIC AREAS IN SASKATCHEWAN

Labour Markets and Retail Trade Areas

LMAs for Saskatchewan were identified using Statistics Canada's place-of-work, place-of-residence data base and the methodology described in Chapter Two. Potential focal points were first selected. For historical continuity, the 62 communities used in the previous analyses of Saskatchewan's Labour Market Areas were selected for the current study. CSD data were first aggregated into existing RM boundaries. All geographies inside each RM, except for the potential focal point(s) were considered rural. Commutes were then identified into and out of the focal point to destinations within and outside the RM.

A frequency matrix was created whose dimensions were potential focal points x the number of rural geographies x 2. In Saskatchewan's case there were 62 potential focal points and 297 rural geographies in the southern agricultural area.

Each rural geography was attached to one of the potential focal points based on the strength of the commuting flows as indicated by the P[R(j)C(i)] statistics discussed in Chapter Two.

Some rural geographies have commuters who travel to more than one potential focal point of course. To resolve the assignment of such rural geographies, a factor analysis program was used to "pair" potential focal points that share commuters in a substantial manner. Urban centres that interact with the same rural space are thus combined to create a single composite focal point where two or more had been hypothesized. Through this process the number of potential focal points were reduced from 62 to 29. The large number of remaining communities,

which did not form a linkage with another urban place, reflects the dispersed pattern of small centres with only limited linkages outside the immediately adjacent rural area.

The final step in defining the spatial structure of Saskatchewan's LMAs was achieved by using a cluster analysis program to assign rural geographies to the set of composite focal points based on the strength of the commuting flows. Most, but not all, rural geographies were thus assigned. Those rural geographies with a commuting rate of less than five percent of their labour force to a focal point were left unattached. The map in Figure 1 shows the 29 composite focal points with their rural tributary areas. These geographies are Labour Market Areas. The shaded areas identify 40 RMs which did not attach to any urban centre. This number is approximately one-half the number of RMs that were unattached in the 1991 study of Saskatchewan labour market areas. This decrease in the number of unattached RMs occurred in the context of a very substantial increase in the number of commuters between 1991 and 1996. Essentially, the previously unattached RMs attached to a nearby community, increasing the size of several LMAs (as defined in previous LMA studies) by from one to three RMs.

If everything were equal—population density, quality of the highway network, for example—the geographic size of the LMA would reflect the job generating capacity of the focal point communities. Thus, in central Saskatchewan, roughly the brown soil zone, Saskatoon, Regina, North Battleford and Prince Albert have relatively large LMAs. In fact these four LMAs account for approximately 60 percent of all Saskatchewan commuters. Where population densities are low, as in southwest Saskatchewan, LMAs are also geographically large because the limited number of employment opportunities compels commuters to drive long distances.

1. Swift Current
2. Assiniboia
3. Moose Jaw
4. Regina
5. Weyburn - Estevan
6. Carnduff - Oxbow
7. Redvers
8. Carlyle - Kipling
9. Moosomin
10. Esterhazy
11. Yorkton - Melville
12. Fort Qu' Appelle
13. Wynyard
14. Humboldt
15. Watrous - Davidson
16. Outlook
17. Saskatoon
18. Rosetown
19. Kindersley
20. Unity
21. North Battleford
22. Lloydminster
23. Turtleford - Glaslyn
24. Meadow Lake - Spiritwood
25. Prince Albert
26. Melfort
27 Wadena - Foam Lake
28. Canora - Kamsack
29. Hudson Bay

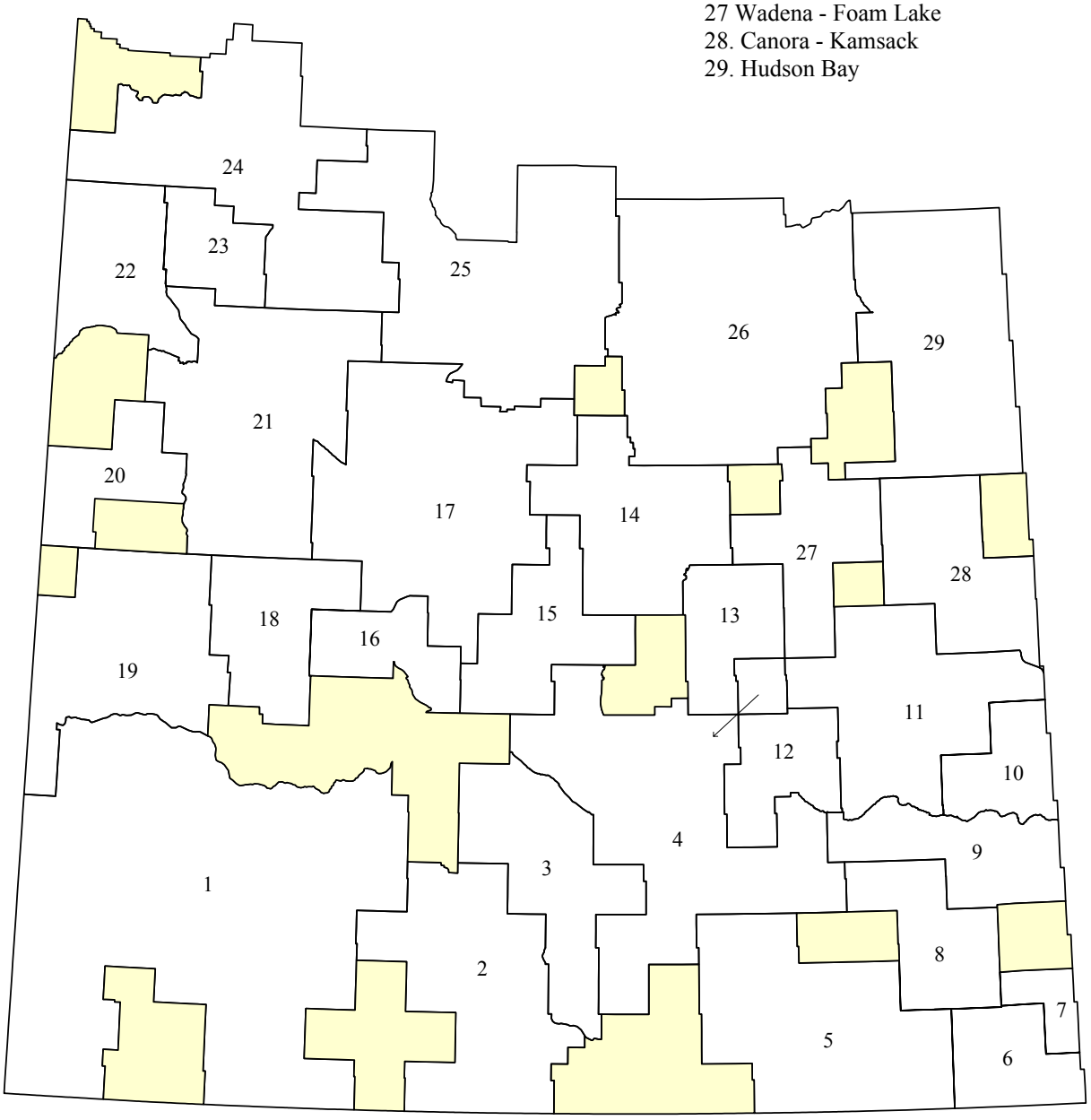

Figure 1. Saskatchewan Labour Market Areas, 2001

In Table 4, the population of the 29 LMAs is recorded. Variations in size of the focal point, as well as local population density, are apparent in these figures. Small communities have limited tributary areas. Thus their LMA populations are small. However, low population density also leads to smaller LMA populations. Thus the Swift Current LMA has a smaller population than Prince Albert's LMA.

Although labour Market Areas are useful constructs, they are unsuitable as planning regions particularly in areas of low population density. Labour Market Areas do not incorporate the entire geography, as planning regions should. In addition, focal points in areas of low population density are often too small to provide all of the everyday goods, services and infrastructure that their populations require.

Labour Market Areas are, nevertheless, essential building blocks, along with shopping market areas, in the identification of Functional Economic Areas. FEAs are constructed to be as self contained as possible in terms of employment as well as private and public service delivery.

This description of an FEA obviously portrays a system focussed on a relatively large community. For several decades, service-type urban-based activity has been a major source of job creation while resource-type rural-based activity has either lost jobs in absolute terms or declined relative to most other activities.

Functional Economic Areas defined on the basis of trading areas and LMAs represent the best approximation to geographically viable regions because employment generated in these FEAs benefits primarily their inhabitants and income earned is (largely) spent within them.

Table 4: Population of Saskatchewan's LMAs

LMA Name	Population	LMA Number
Swift Current	41,525	1
Assiniboia	10,680	2
Moose Jaw	41,190	3
Regina	213,355	4
Estevan-Weyburn	33,420	5
Carnduff-Oxbow	5,590	6
Redvers	2,315	7
Carlyle-Wawota	8,830	8
Moosomin	10,455	9
Esterhazy	8,850	10
Yorkton-Melville	36,460	11
Fort Qu'Appelle	6,775	12
Wynyard	6,170	13
Humboldt	9,515	14
Watrous-Davidson	7,540	15
Outlook	5,565	16
Saskatoon	237,020	17
Rosetown	6,425	18
Kindersley	12,220	19
Unity	8,915	20
North Battleford	33,000	21
Lloydminster	16,695 (SK)	22
Turtleford-Glaslyn	7,775	23
Meadow Lake-Spiritwood	7,845	24
Prince Albert	59,095	25
Melfort	33,375	26
Wadena-Foam Lake	8,045	27
Canora-Kamsack	10,525	28
Hudson Bay	3,455	29

Functional Economic Areas

FEAs for Saskatchewan were defined using journey-to-work data (LMAs) and retail trade areas (Figure 2). The process of identifying them involved imposing the map of retail trade areas drawn around PWR, SWR, and CSC communities over the map of LMAs (Figure 1). In this manner all of southern (agricultural) Saskatchewan could be included in an FEA with at least a CSC community as its focal point. In addition, all of the previously unassigned rural space in southern Saskatchewan could be incorporated into an FEA based upon the proximity to the closest focal point for shopping purposes. A few assignments were made because of physical features, road systems, to make the smallest FEAs as large as possible and to avoid irregular boundaries as much as possible.

A map of Saskatchewan's 11 FEAs is shown in Figure 3. Most FEAs in Saskatchewan represent combinations of smaller, local labour market areas, with the largest regional community in order to satisfy the commuting-and-shopping requirements of the definition of an FEA. In this manner, each FEA is defined with a community of CSC status or higher as its major focal point. Only the Swift Current and the Prince Albert FEAs have approximately the same boundaries as their respective LMAs. Consequently, except for Swift Current and Prince Albert, FEA populations are noticeably larger than the LMA populations. Even so, there is considerable variation between the smallest (Kindersley) and the largest (Saskatoon) as shown in Table 5. Although the size and shape of the LMAs differed from previous studies, the FEAs did not. This is because the adjustments to the LMA boundaries occurred within what turned out to be rather viable and enduring FEA boundaries. There are 927,405 people included in the 11 FEAs, 93.7 percent of the province's population. An additional 62,830 people live in northern Saskatchewan.

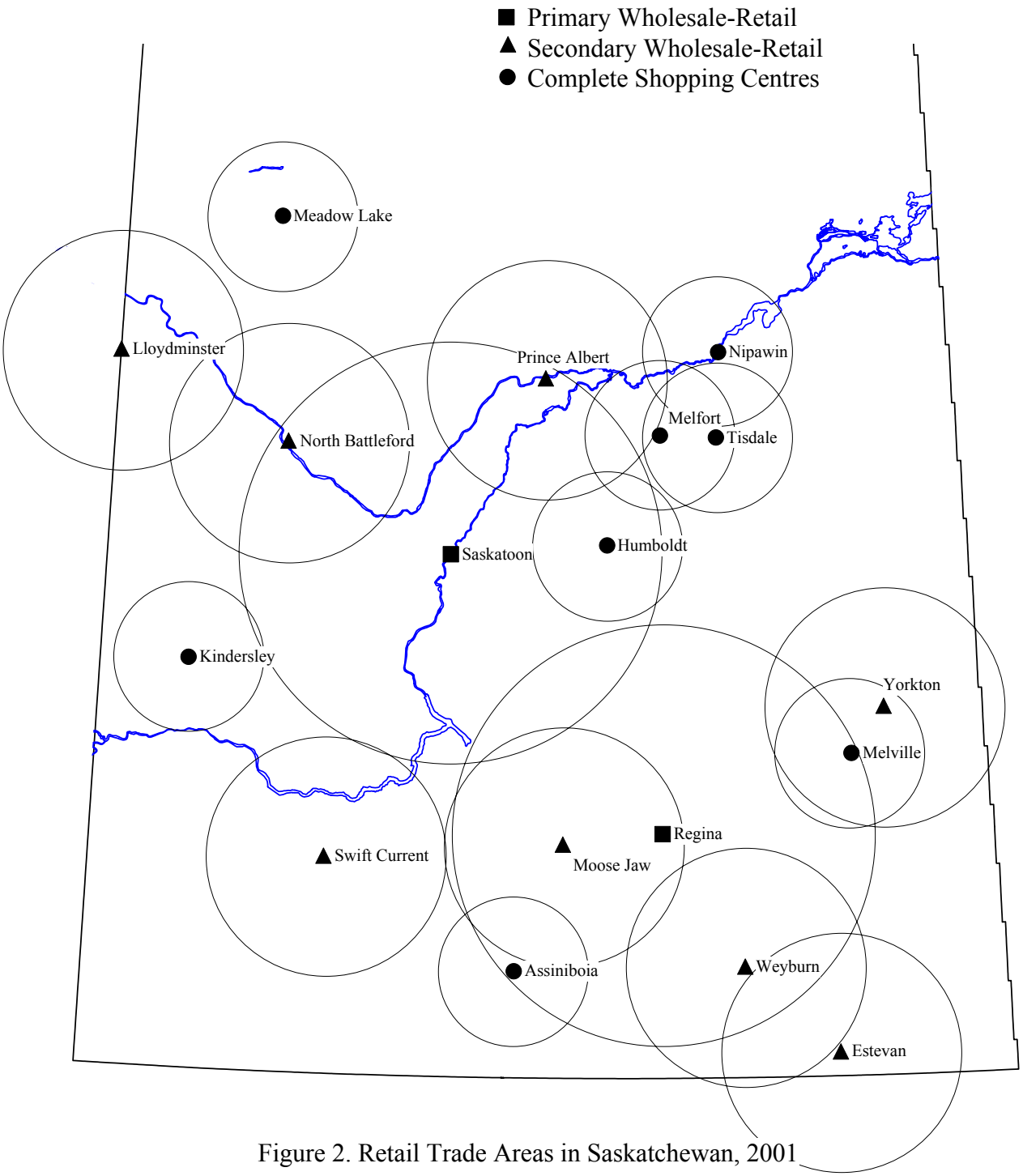

Figure 2. Retail Trade Areas in Saskatchewan, 2001

Figure 3. Functional Economic Areas in Saskatchewan, 2001

Table 5: Population of Saskatchewan's FEAs

FEA Name	Population	FEA Number
Estevan-Weyburn	65,565	1
Moose Jaw	53,745	2
Swift Current-Maple Creek	48,590	3
Kindersley-Rosetown	21,070	4
Saskatoon	255,490	5
Regina	224,370	6
Yorkton-Melville	60,400	7
Humboldt	25,475	8
Melfort-Tisdale-Nipawin	40,420	9
Prince Albert	57,975	10
North Battleford-Lloydminster	74,305	11

The cohesiveness of the FEA system can be measured by reviewing the commuting behaviour of the residents. As a benchmark, the magnitude of commuting flows along with origin and destination of commuters is summarized for all FEAs combined in Table 6. Non-commuters by place of residence and work are shown in Table 7.

For all of Saskatchewan, there were 91,460 members of the labour force who commuted to work in a CSD other than the one where they were resident. This compares with 381,595 non-commuting members of the labour force. Of these non-commuters, 271,840 are urban dwellers while 109,755 live in rural areas.

It is useful to identify the nature of the commutes at a provincial level as this defines a provincial average against which the individual FEAs can be compared. Of all commuters, 67,345 people journeyed to a job in the same FEA–that is, 73.6 percent of the Saskatchewan commutes to work terminated in the FEA of origin. It may also be noted that 14,800 commuters

Table 6: Saskatchewan's FEA System, Commuting Summary

Place of Work of Commuters									
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Saskatchewan Communities	Other Saskatchewan RMs	AB	MB	Other	Total Commuters
Communities	2,805	12,080	14,885	5,260	2,315	3,990	645	1,230	28,325
RMs	43,085	9,375	52,460	4,780	2,445	2,210	590	650	63,135
Regional Sum	45,890	21,455	67,345	10,040	4,760	6,200	1,235	1,880	91,460

Table 7: Saskatchewan Non-commuters by Place of Residence-and-Work

Functional Economic Area	Place of Residence	Place of Work: Communities	RMs	Total
FEA 1: Estevan-Weyburn	Communities	12,600	-	12,600
	RMs	-	14,725	14,725
	Total			27,325
FEA 2: Moose Jaw	Communities	14,275	-	14,275
	RMs	-	7,050	7,050
	Total			21,325
FEA 3: Swift Current	Communities	8,885	-	8,885
	RMs	-	12,205	12,205
	Total			21,090
FEA 4: Rosetown-Kindersley	Communities	3,805	-	3,805
	RMs	-	4,270	4,270
	Total			8,075
FEA 5: Saskatoon	Communities	95,000	-	95,000
	RMs	-	15,240	15,240
	Total			110,240
FEA 6: Regina	Communities	89,595	-	89,595
	RMs	-	12,105	12,105
	Total			101,700
FEA 7: Melville-Yorkton	Communities	11,550	-	11,550
	RMs	-	8,105	8,105
	Total			19,655
FEA 8: Humboldt	Communities	4,120	-	4,120
	RMs	-	5,575	5,575
	Total			9,695
FEA 9: Melfort-Tisdale-Nipawin	Communities	6,400	-	6,400
	RMs	-	9,995	9,995
	Total			16,395
FEA 10: Prince Albert	Communities	13,980	-	13,980
	RMs	-	5,830	5,830
	Total			19,810
FEA 11: North Battleford-Lloydminster	Communities	11,630	-	11,630
	RMs	-	14,655	14,655
	Total			26,285
Summary	Communities	271,840	-	271,840
	RMs	-	109,755	109,755
	Total			381,595

(16.2 percent) journeyed to work to destinations outside the FEA of residence but within Saskatchewan. Another 9,315 (10.2 percent) left the province to work, 6,200 to Alberta, 1,235 to Manitoba and 1,880 to other destinations. As an aside it may be noted that the preferred destination for out-of-province commutes from 9 of the 11 Saskatchewan FEAs was Alberta. Only the Humboldt and Yorkton-Melville FEAs had greater out-of-province commutes to some other destination.

Of the within FEA commuters, the dependence of rural dwellers on employment in the urban economy can be seen in the journeys from rural residences to places of work in focal point communities. Of the 52,460 rural dwellers working within the FEA of residence, 43,085 (82.1 percent) have jobs in urban focal points. Only 17.9 percent of rural Saskatchewan's commuters travel to work in another rural setting within their FEA of residence.

Commutes from communities within the FEA system to workplaces outside the community of residence are predominantly to a rural setting (81.2 percent) although the numbers are much smaller than commutes originating in rural areas. These urban-to-rural commutes include many school teachers, nurses, and administrators who live in a larger focal point community but work in one of the small centres too small to be considered a focal point.

Overall, the majority of commuters (69.0 percent) are rural dwellers and most of the total commutes which originate and terminate in Saskatchewan (89.8 percent), end in an urban centre (68.1 percent).

In Table 8, the characteristics of the commuting patterns of each of Saskatchewan's 11 FEAS are individually summarized. Detailed profiles of commuting patterns as well as populations by age and gender are provided for each FEA in the appendix to this chapter.

The statistics in Table 8 reflect some general principles as well as the individual characteristics of each FEA. In column one, for example, a general relationship between size of the urban focal point(s) and percent of the labour force commuting is clear. The FEAs with the two PWR focal point communities have the lowest percentages of their labour force commuting. Most of the jobs in these FEAs are in the urban areas and most of their populations live in these communities. At the same time, these two FEAs provide the greatest absolute number of jobs for rural commuters. Of the 52,460 rural dwellers in Saskatchewan commuting to work in the FEA of residence, 17,290 (33.0 percent) find employment in the focal point communities of Saskatoon and Regina FEAs.

Prince Albert, Humboldt and North Battleford-Lloydminster FEAs each have unusually high percentages of their labour forces commuting–but for different reasons. In the case of Lloydminster, short commutes across the provincial boundary, but within the urban area, cause the commuting numbers to be much higher than they would be if all of the city were in Saskatchewan. This is also what explains the highest out-of-province commuting figures recorded. An analogous circumstance explains the numbers for Prince Albert. A large number of commutes from both Prince Albert and adjacent RMs to the forestry-industry plants immediately north-east of the city are responsible for a large number of commutes. If the city boundaries included the plants, commuting numbers would be much smaller. This also explains the relatively low percentage of the within-FEA commutes to an urban destination. As opposed to North Battleford-Lloydminster, however, where the short across-the-border commutes also result in a low within-FEA statistic, the commutes to the pulp mills are all within Prince Albert's FEA. For Humboldt, a geographically small FEA, whose northwestern and southwestern

Table 8: Summary Commuting Characteristics of Individual Saskatchewan FEAs

	% of LF Commuting	% OOP	% Other Saskatchewan		% Within FEA	% Within FEA	
			Urban	Rural		Urban	Rural
Regina	14.1	8.0	10.5	4.1	77.3	60.1	39.9
Saskatoon	14.6	9.8	11.0	6.1	73.1	73.8	26.2
Swift Current	17.0	6.8	6.5	1.4	85.3	65.3	34.7
Kindersley-Rosetown	19.0	4.8	15.3	5.6	74.3	73.0	27.0
Moose Jaw	21.0	8.5	16.4	14.3	60.9	49.9	50.1
Estevan-Weyburn	23.6	4.4	17.1	3.4	75.2	62.8	37.2
Melfort-Tisdale-Nipawin	24.1	5.5	9.6	4.0	80.9	75.5	24.5
Yorkton-Melville	25.4	8.8	9.7	4..8	76.7	89.3	10.7
Prince Albert	28.9	5.4	10.8	4.6	79.2	57.7	42.3
Humboldt	29.1	2.4	17.6	13.0	67.0	78.2	21.8
N. Battleford-Lloydminster	30.6	30.1	4.6	2.1	63.1	71.9	28.1

margins are relatively close to Prince Albert and Saskatoon respectively, approximately 18 percent of its commuters travel to work in urban centres outside the FEA. Some also commute out to Wynyard to the south and Melfort to the north. The statistics for Moose Jaw, Saskatchewan's fourth largest city, require some explanation as well. Moose Jaw has the lowest percentage of commuters whose journey-to-work originates and terminates within the FEA. This is a reflection of the large number of residents whose jobs are in Regina (only 45 minutes away although in a different FEA). In addition, the Moose Jaw FEA is the only FEA with a higher percent of its internal commutes terminating in rural areas. Most of these urban-to-rural journeys are made by Moose Jaw residents to the military base immediately south of the city. Finally, Regina has an unusually small number of commutes terminating in urban locations for an FEA with a city of this size. This too is a result of local jurisdictional boundaries separating an economic unit. The steel mill, and associated activities, are situated in the RM even though it is part of the urban economy. Short commutes from within the city limits to work in the industrial area are recorded as an urban-to-rural journey. A commute from a distant rural residence to the steel mill is recorded as a rural-to-rural trip.

The viability of the FEA economies is based in large part on the job-generating capacity of larger communities within the region. A growing urban economy will attract commuters from adjacent rural areas as the statistics in the tables indicate. Shopping patterns combined with journey to work permit the assignment of all geographies within a region. The FEAs that emerge represent the most cohesive set of regions that can be designed for Saskatchewan.

APPENDIX TABLES-SASKATCHEWAN

Table S-1. Functional Economic Area: Estevan-Weyburn

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	145	935	1,080	180	20	85	15	30	1,410
RMs	3,850	1,435	5,285	1,265	265	70	90	80	7,055
Regional Sum	3,995	2,370	6,365	1,445	285	155	105	110	8,465

Table S-2. Functional Economic Area: Moose Jaw

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	40	1,270	1,310	720	550	100	40	50	2,770
RMs	1,685	465	2,150	210	260	155	55	80	2,910
Regional Sum	1,725	1,735	3,460	930	810	255	95	130	5,680

Table S-3. Functional Economic Area: Swift Current

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	65	595	660	70	-	40	-	30	800
RMs	2,345	685	3,030	210	60	155	20	50	3,525
Regional Sum	2,410	1,280	3,690	280	60	195	20	80	4,325

Table S-4. Functional Economic Area: Kindersley-Rosetown

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	15	180	195	110	10	20	-	20	355
RMs	1,010	200	1,210	180	95	50	-	-	1,535
Regional Sum	1,025	380	1,405	290	105	70	-	20	1,890

Table S-5. Functional Economic Area: Saskatoon

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	350	2,500	2,850	1,765	785	840	210	490	6,940
RMs	9,845	1,115	10,960	320	365	190	10	105	11,950
Regional Sum	10,195	3,615	13,810	2,085	1,150	1,030	220	595	18,890

Table S-6. Functional Economic Area: Regina

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	325	2,950	3,275	1,195	470	545	200	385	6,070
RMs	7,445	2,210	9,655	565	220	115	30	70	10,655
Regional Sum	7,770	5,160	12,930	1,760	690	660	230	455	16,725

Table S-7. Functional Economic Area: Yorkton-Melville

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	445	260	705	265	180	20	45	40	1,255
RMs	4,125	290	4,415	380	140	85	320	80	5,420
Regional Sum	4,570	550	5,120	645	320	105	365	120	6,675

Table S-8. Functional Economic Area: Humboldt

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	115	280	395	155	115	10	15	20	710
RMs	1,970	300	2,270	545	400	10	10	30	3,265
Regional Sum	2,085	580	2,665	700	515	20	25	50	3,975

Table S-9. Functional Economic Area: Melfort-Tisdale-Nipawin

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	45	450	495	190	45	50	40	40	860
RMs	3,140	585	3,725	310	165	80	45	30	4,355
Regional Sum	3,185	1,035	4,220	500	210	130	85	70	5,215

Table S-10. Functional Economic Area: Prince Albert

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	95	1,375	1,470	355	70	75	60	55	2,085
RMs	3,585	1,320	4,905	515	300	180	-	65	5,965
Regional Sum	3,680	2,695	6,375	870	370	255	60	120	8,050

Table S-11. Functional Economic Area: North Battleford-Lloydminster

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other SK Communities	Other SK RMs	AB.	MB.	Other	Total Commuters
Communities	1,165	1,285	2,450	255	70	2,205	20	70	5,070
RMs	4,085	770	4,855	280	175	1,120	10	60	6,500
Regional Sum	5,250	2,055	7,305	535	245	3,325	30	130	11,570

Table S-12: Saskatchewan FEAs, Summary

	Totals	% of FEA Pop	% Total Pop
FEA 1	65,565	7.1	6.6
FEA 2	53,745	5.8	5.4
FEA 3	48,590	5.2	4.9
FEA 4	21,070	2.3	2.1
FEA 5	255,490	27.5	25.8
FEA 6	224,370	24.2	22.7
FEA 7	60,400	6.5	6.1
FEA 8	25,475	2.7	2.6
FEA 9	41,925	4.5	4.2
FEA 10	57,975	6.2	5.9
FEA 11	74,305	8.0	7.5
FEA Total	**927,405**	**100.0**	**93.7**
Northern	62,830		6.3
Saskatchewan Total	**990,235**		**100.0**

Table S-13: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 1, Estevan -Weyburn

Focal Points and RMs	Female	Male	Sum Total
City of Estevan	5,365	5,395	10,760
City of Weyburn	4,630	5,085	9,715
Town of Bengough	440	440	880
Town of Moosomin	1,115	1,290	2,405
Town of Wolseley	645	715	1,360
Argyle RM 1	415	400	815
Mount Pleasant RM 2	780	780	1,560
Enniskillen RM 3	950	900	1,850
Coalfields RM 4	920	785	1,705
Estevan RM 5	585	505	1,090
Benson RM 35	270	240	510
Browning RM 34	620	585	1,205
Moose Creek RM 33	375	340	715
Reciprocity RM 32	360	290	650
Storthoaks RM 31	305	290	595
Antler RM 61	870	850	1,720
Moose Mountain RM 63	1,075	1,080	2,155
Brock RM 64	560	545	1,105
Tecumseh RM 65	570	565	1,135
Golden West RM 95	280	250	530
Hazelwood RM 94	210	205	415
Wawken RM 93	895	880	1,775
Walpole RM 92	255	200	455
Maryfield RM 91	440	435	875
Cambria RM 6	350	285	635
Souris Valley RM 7	230	210	440
Lake Alma RM 8	220	165	385
Surprise Valley RM 9	230	195	425
Happy Valley RM 10	115	100	215
The Gap RM 39	215	225	440
Laurier RM 38	645	635	1,280
Lomond RM 37	225	210	435
Cymri RM 36	670	675	1,345
Griffin RM 66	210	205	415
Weyburn RM 67	550	460	1,010
Brokenshell RM 68	180	140	320
Scott RM 98	470	530	1,000
Wellington RM 97	220	200	420
Fillmore RM 96	360	390	750
Moosomin RM 121	425	340	765

Martin RM 122	385	355	740
Silverwood RM 123	310	295	605
Kingsley RM 124	755	795	1,550
Chester RM 125	520	495	1,015
Elcapo RM 154	1,200	1,315	2,515
Willowdale RM 153	670	735	1,405
Rocanville RM 151	765	710	1,475
FEA Totals	32,850	32,715	65,565

Table S-14: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 2, Moose Jaw

Focal Points and RMs	Female	Male	Sum Total
City of Moose Jaw	15,895	17,110	33,005
Town of Assiniboia	1,235	1,435	2,670
Excel RM 71	335	285	620
Lake of the Rivers RM 72	210	185	395
Stonehenge RM 73	415	345	760
Wood River RM 74	500	435	935
Hart Butte RM 11	660	625	1,285
Poplar Valley RM 12	435	420	855
Old Post RM 43	285	245	530
Waverley RM 44	305	235	540
Willow Bunch RM 42	490	480	970
Gravelbourg RM 104	805	910	1,715
Sutton RM 103	380	370	750
Lake Johnston RM 102	110	85	195
Terrell RM 101	190	150	340
Baildon RM 131	385	335	720
Hillsborough RM 132	80	55	135
Rodgers RM 133	105	115	220
Shamrock RM 134	155	140	295
Chaplin RM 164	240	265	505
Wheatlands RM 163	250	240	490
Caron RM 162	830	835	1,665
Moose Jaw RM 161	995	855	1,850
Marquis RM 191	430	385	815
Eyebrow RM 193	295	270	565
Enfield RM 194	475	445	920
FEA Totals	26,490	27,255	53,745

Table S-15: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 3, Swift Current-Maple Creek

Focal Points and RMs	Female	Male	Sum Total
City of Swift Current	7,055	7,825	14,880
Town of Shaunavon	875	985	1,860
Town of Maple Creek	1,070	1,240	2,310
Pinto Creek No. 75	280	270	550
Auvergne No. 76	485	565	1,050
Wise Creek No. 77	235	175	410
Grassy Creek No. 78	220	185	405
Arlington No. 79	190	180	370
Maple Creek No. 111	600	600	1,200
Piapot No. 110	230	185	415
Carmichael No. 109	240	215	455
Bone Creek No. 108	235	230	465
Lac Pelletier No. 107	270	230	500
Canaan No. 225	270	235	505
Victory No. 226	400	380	780
Swift Current No. 137	785	775	1,560
Webb No. 138	275	235	510
Gull Lake No. 139	800	770	1,570
Big Stick No. 141	160	115	275
Enterprise No. 142	230	210	440
Fox Valley No. 171	375	370	745
Pittville No. 169	210	215	425
Riverside No. 168	630	620	1,250
Saskatchewan Landing No. 167	315	325	640
Lacadena No. 228	645	595	1,240
Miry Creek No. 229	445	395	840
Clinworth No. 230	250	205	455
Happyland No. 231	825	835	1,660
Deer Forks No. 232	355	335	690
Glen McPherson No. 46	95	95	190
Mankota No. 45	410	405	815
Whiska Creek No. 106	395	410	805
Glen Bain No. 105	205	185	390
Val Marie No. 17	340	320	660
Lone Tree No. 18	240	210	450
Frontier No. 19	345	310	655
Reno No. 51	360	280	640
White Valley No. 49	640	610	1,250
Lawtonia No. 135	360	315	675
Coulee No. 136	300	280	580
Excelsior No. 166	645	670	1,315
Morse No. 165	820	890	1,710
FEA Totals	24,110	24,480	48,590

Table S-16: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 4, Kindersley-Rosetown

Focal Points and RMs	Female	Male	Sum Total
Chesterfield RM 261	580	515	1,095
Newcombe RM 260	200	195	395
Snipe Lake RM 259	855	860	1,715
Monet RM 257	565	605	1,170
Pleasant Valley RM 288	225	195	420
St. Andrews RM 287	390	370	760
Marriott RM 317	255	250	505
Mountain View RM 318	245	170	415
Kindersley RM 290	775	710	1,485
Milton RM 292	275	240	515
Antelope Park RM 322	110	75	185
Prairiedale RM 321	200	190	390
Oakdale RM 320	365	280	645
Winslow RM 319	425	345	770
Grandview RM 349	275	270	545
Mariposa RM 350	210	170	380
Progress RM 351	1,055	1,085	2,140
Heart's Hill RM 352	195	165	360
Town of Kindersley	2,305	2,380	4,685
Town of Rosetown	1,195	1,300	2,495
FEA Totals	10,700	10,370	21,070

Table S-17: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 5, Saskatoon

Focal Points and RMs	Female	Male	Sum Total
City of Saskatoon	93,435	100,220	193,655
Town of Outlook	1,010	1,105	2,115
Morris RM 312	1,410	1,390	2,800
Lost River RM 313	185	135	320
Dundurn RM 314	605	515	1,120
Corman Park RM 344	5,930	5,755	11,685
Blucher RM 343	3,735	3,665	7,400
Colonsay RM 342	405	420	825
Big Arm RM 251	400	415	815
Arm River RM 252	690	720	1,410
Willner RM 253	180	135	315
Loreburn RM 254	490	470	960
Rudy RM 284	315	255	570
Rosedale RM 283	530	495	1,025
McCraney RM 282	430	430	860
Wood Creek RM 281	305	245	550
Wreford RM 280	345	355	700
King George RM 256	130	120	250
Coteau RM 255	320	260	580
Maple Bush RM 224	220	185	405
Huron RM 223	200	175	375
Craik RM 222	435	430	865
Milden RM 286	505	490	995
Fertile Valley RM 285	480	445	925
Montrose RM 315	375	325	700
Harris RM 316	240	255	495
Biggar RM 347	1,635	1,730	3,365
Perdue RM 346	420	410	830
Vanscoy RM 345	2,085	2,035	4,120
Eagle Creek RM 376	345	260	605
Grant RM 372	520	475	995
Aberdeen RM 373	630	585	1,215
Laird RM 404	1,320	1,265	2,585
Rosthern RM 403	1,995	2,070	4,065
Fish Creek RM 402	275	205	480
Hoodoo RM 401	1,135	1,185	2,320
Great Bend RM 405	545	590	1,135
Blaine Lake RM 434	520	540	1,060
FEA Totals	124,730	130,760	255,490

Table S-18: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 6, Regina

Focal Points and RMs	Female	Male	Sum Total
City of Regina	87,110	93,285	180,395
Norton RM 69	270	260	530
Key West RM 70	425	395	820
Elmsthorpe RM 100	395	350	745
Caledonia RM 99	485	470	955
Montmartre RM 126	600	555	1,155
Francis RM 127	1,000	945	1,945
Lajord RM 128	535	485	1,020
Bratt's Lake RM 129	365	330	695
Redburn RM 130	485	500	985
Pense RM 160	575	565	1,140
Sherwood RM 159	755	635	1,390
Edenwold RM 158	3,235	3,165	6,400
South Qu'Appelle RM 157	1,065	1,005	2,070
Indian Head RM 156	1,190	1,225	2,415
Abernethy RM 186	450	445	895
Fort San, RV	1,115	1,285	2,400
Lumsden RM 189	2,230	2,055	4,285
Dufferin RM 190	550	460	1,010
Sarnia RM 221	410	380	790
Longlaketon RM 219	890	800	1,690
McKillop RM 220	775	790	1,565
Cupar RM 218	945	1,000	1,945
Lipton RM 217	560	520	1,080
Tullymet RM 216	200	130	330
Kellross RM 247	670	645	1,315
Touchwood RM 248	225	190	415
Mount Hope RM 279	485	445	930
Kutawa RM 278	740	745	1,485
Emerald RM 277	425	360	785
Last Mountain Valley RM 250	430	360	790
FEA Totals	109,590	114,780	224,370

Table S-19: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 7, Yorkton-Melville

Focal Points and RMs	Female	Male	Sum Total
City of Yorkton	7,035	8,125	15,160
City of Melville	2,170	2,465	4,635
Calder RM 241	380	325	705
Wallace RM 243	640	580	1,220
Orkney RM 244	1,315	1,240	2,555
Garry RM 245	315	270	585
Insinger RM 275	555	605	1,160
Good Lake RM 274	1,400	1,540	2,940
Sliding Hills RM 273	385	370	755
Cote RM 271	1,500	1,550	3,050
St. Philips RM 301	345	315	660
Keys RM 303	245	225	470
Buchanan RM 304	405	385	790
Invermay RM 305	465	445	910
Hazel Dell RM 335	545	435	980
Preeceville RM 334	1,535	1,640	3,175
Clayton RM 333	825	800	1,625
Livingston RM 331	300	225	525
Spy Hill RM 152	535	520	1,055
Langenburg RM 181	1,000	1,000	2,000
Fertile Belt RM 183	1,995	2,025	4,020
Grayson RM 184	540	545	1,085
McLeod RM 185	700	670	1,370
Stanley RM 215	445	410	855
Cana RM 214	540	480	1,020
Saltcoats RM 213	865	940	1,805
Churchbridge RM 211	905	870	1,775
Ituna Bon Accord RM 246	655	710	1,365
Foam Lake RM 276	1,055	1,095	2,150
FEA Totals	29,595	30,805	60,400

Table S-20: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 8, Humboldt

Focal Points and RMs	Female	Male	Sum Total
Town of Humboldt	2,455	2,640	5,095
Usborne RM 310	1,170	1,180	2,350
Elfros RM 307	440	340	780
Big Quill RM 308	1,305	1,400	2,705
Prairie Rose RM 309	270	270	540
Leroy RM 339	550	525	1,075
Lakeside RM 338	875	925	1,800
Lakeview RM 337	1,000	1,045	2,045
Sasman RM 336	620	540	1,160
Viscount RM 341	470	435	905
Wolverine RM 340	300	260	560
Spalding RM 368	460	480	940
St. Peter RM 369	1,175	1,030	2,205
Humboldt RM 370	505	445	950
Bayne RM 371	625	610	1,235
Three Lakes RM 400	595	535	1,130
FEA Totals	12,815	12,660	25,475

Table S-21: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 9, Melfort-Nipawin-Tisdale

Focal Points and RMs	Female	Male	Sum Total
City of Melfort	2,705	3,065	5,770
Town of Nipawin	2,050	2,275	4,325
Town of Tisdale	1,405	1,540	2,945
Hudson Bay RM 394	1,785	1,670	3,455
Porcupine RM 395	1,125	1,000	2,125
Kelvington RM 366	850	860	1,710
Ponass Lake RM 367	630	630	1,260
Barrier Valley RM 397	485	405	890
Pleasantdale RM 398	820	790	1,610
Tisdale RM 427	585	555	1,140
Star City RM 428	810	720	1,530
Willow Creek RM 458	475	440	915
Connaught RM 457	470	475	945
Arborfield RM 456	605	565	1,170
Moose Range RM 486	1,175	1,135	2,310
Nipawin RM 487	835	810	1,645
Torch River RM 488	1,535	1,380	2,915
Lake Lenore RM 399	565	515	1,080
Flett's Springs RM 429	515	385	900
Kinistino RM 459	875	905	1,780
FEA Totals	20,300	20,120	40,420

Table S-22: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 10, Prince Albert

Focal Points and RMs	Female	Male	Sum Total
City of Prince Albert	16,515	18,270	34,785
Invergordon RM 430	435	360	795
St. Louis RM 431	915	900	1,815
Duck Lake RM 463	850	820	1,670
Prince Albert RM 461	2,045	1,285	3,330
Birch Hills RM 460	860	825	1,685
Paddockwood RM 520	910	785	1,695
Lakeland RM 521	395	395	790
Garden River RM 490	545	535	1,080
Buckland RM 491	1,805	1,620	3,425
Leask RM 464	705	695	1,400
Shellbrook RM 493	1,525	1,495	3,020
Canwood RM 494	1,245	1,240	2,485
FEA Totals	28,750	29,225	57,975

Table S-23: Saskatchewan FEAs, Population by RMs and Focal Points, by Gender, FEA 11, North Battleford-Lloydminster

Focal Points and RMs	Female	Male	Sum Total
City of North Battleford	6,650	7,420	14,070
City of Lloydminster (SK Part)	3,830	3,790	7,620
Town of Meadow Lake	2,300	2,515	4,815
Town of Unity	1,040	1,145	2,185
Meota RM 468	675	600	1,275
Turtle River RM 469	460	410	870
Paynton RM 470	225	240	465
Eldon RM 471	990	945	1,935
Wilton RM 472	1,480	1,385	2,865
Glenside RM 377	210	190	400
Rosemount RM 378	175	140	315
Prairie RM 408	300	265	565
Battle River RM 438	2,375	2,430	4,805
Eye Hill RM 382	1,170	1,110	2,280
Grass Lake RM 381	320	250	570
Tramping Lake RM 380	255	265	520
Reford RM 379	300	265	565
Buffalo RM 409	940	925	1,865
Round Valley RM 410	250	230	480
Senlac RM 411	230	160	390
Manitou Lake RM 442	420	460	880
Hillsdale RM 440	510	430	940
Cut Knife RM 439	640	645	1,285
Mayfield RM 406	260	210	470
Redberry RM 435	435	445	880
Douglas RM 436	290	260	550
North Battleford RM 437	540	450	990
Round Hill RM 467	300	245	545
Meeting Lake RM 466	285	235	520
Spiritwood RM 496	1,475	1,455	2,930
Medstead RM 497	820	825	1,645
Big River RM 555	560	525	1,085
Britannia RM 502	705	640	1,345
Frenchman Butte RM 501	1,600	1,565	3,165
Mervin RM 499	610	575	1,185
Parkdale RM 498	580	495	1,075
Loon Lake RM 561	680	680	1,360
Meadow Lake RM 588	1,470	1,270	2,740
Beaver River RM 622	970	890	1,860
FEA Totals	37,325	36,980	74,305

Table S-24: Saskatchewan FEAs, Population by Age Group and Gender, FEA 1, Estevan-Weyburn

Age Group	Female	Male	Sum Total
0 - 4	2,140	1,955	4,095
5 - 9	2,395	2,295	4,690
10 - 14	2,610	2,515	5,125
15 - 19	2,710	2,490	5,200
20 - 24	1,955	1,655	3,610
25 - 29	1,790	1,625	3,415
30 - 34	2,215	2,165	4,380
35 - 39	2,465	2,400	4,865
40 - 44	2,420	2,240	4,660
45 - 49	2,020	1,825	3,845
50 - 54	1,585	1,630	3,215
55 - 59	1,390	1,405	2,795
60 - 64	1,525	1,460	2,985
65 - 69	1,605	1,595	3,200
70 - 74	1,405	1,620	3,025
75 +	2,620	3,840	6,460
Total	32,850	32,715	65,565

Table S-25: Saskatchewan FEAs, Population by Age Group and Gender, FEA 2, Moose Jaw

Age Group	Female	Male	Sum Total
0 - 4	1,655	1,630	3,285
5 - 9	2,060	1,870	3,930
10 - 14	2,230	2,105	4,335
15 - 19	2,080	2,000	4,080
20 - 24	1,565	1,405	2,970
25 - 29	1,335	1,460	2,795
30 - 34	1,965	1,925	3,890
35 - 39	2,260	2,195	4,455
40 - 44	2,010	1,985	3,995
45 - 49	1,655	1,505	3,160
50 - 54	1,215	1,200	2,415
55 - 59	1,030	1,075	2,105
60 - 64	1,115	1,195	2,310
65 - 69	1,225	1,300	2,525
70 - 74	1,170	1,420	2,590
75 +	1,920	2,985	4,905
Total	26,490	27,255	53,745

Table S-26: Saskatchewan FEAs, Population by Age Group and Gender, FEA 3, Swift Current-Maple Creek

Age Group	Female	Male	Sum Total
0 - 4	1,475	1,410	2,885
5 - 9	1,795	1,690	3,485
10 - 14	2,050	2,015	4,065
15 - 19	1,905	1,840	3,745
20 - 24	1,290	1,200	2,490
25 - 29	1,095	1,170	2,265
30 - 34	1,655	1,675	3,330
35 - 39	2,015	1,915	3,930
40 - 44	1,870	1,725	3,595
45 - 49	1,530	1,375	2,905
50 - 54	1,220	1,230	2,450
55 - 59	1,095	1,150	2,245
60 - 64	1,175	1,175	2,350
65 - 69	1,190	1,225	2,415
70 - 74	1,075	1,190	2,265
75 +	1,675	2,495	4,170
Total	24,110	24,480	48,590

Table S-27: Saskatchewan FEAs, Population by Age Group and Gender, FEA 4, Kindersley-Rosetown

Age Group	Female	Male	Sum Total
0 - 4	695	620	1,315
5 - 9	870	830	1,700
10 - 14	970	925	1,895
15 - 19	920	765	1,685
20 - 24	620	480	1,100
25 - 29	555	505	1,060
30 - 34	640	720	1,360
35 - 39	930	810	1,740
40 - 44	885	725	1,610
45 - 49	575	565	1,140
50 - 54	515	470	985
55 - 59	425	435	860
60 - 64	470	475	945
65 - 69	450	530	980
70 - 74	460	480	940
75 +	720	1,035	1,755
Total	10,700	10,370	21,070

Table S-28: Saskatchewan FEAs, Population by Age Group and Gender, FEA 5, Saskatoon

Age Group	Female	Male	Sum Total
0 - 4	9,555	9,100	18,655
5 - 9	10,225	9,635	19,860
10 - 14	9,930	9,470	19,400
15 - 19	9,290	9,275	18,565
20 - 24	9,565	10,190	19,755
25 - 29	8,785	8,825	17,610
30 - 34	10,270	10,675	20,945
35 - 39	10,670	11,275	21,945
40 - 44	9,880	9,925	19,805
45 - 49	8,055	8,075	16,130
50 - 54	5,765	5,930	11,695
55 - 59	4,870	5,085	9,955
60 - 64	4,550	4,850	9,400
65 - 69	4,025	4,700	8,725
70 - 74	3,465	4,355	7,820
75 +	5,830	9,395	15,225
Total	124,730	130,760	255,490

Table S-29: Saskatchewan FEAs, Population by Age Group and Gender, FEA 6, Regina

Age Group	Female	Male	Sum Total
0 - 4	7,720	7,440	15,160
5 - 9	8,605	8,315	16,920
10 - 14	8,920	8,325	17,245
15 - 19	8,700	8,175	16,875
20 - 24	7,730	7,940	15,670
25 - 29	7,365	7,545	14,910
30 - 34	8,845	9,455	18,300
35 - 39	9,445	9,645	19,090
40 - 44	8,820	8,980	17,800
45 - 49	7,305	7,450	14,755
50 - 54	5,400	5,560	10,960
55 - 59	4,490	4,750	9,240
60 - 64	4,155	4,465	8,620
65 - 69	3,950	4,250	8,200
70 - 74	3,360	4,195	7,555
75 +	4,780	8,290	13,070
Total	109,590	114,780	224,370

Table S-30: Saskatchewan FEAs, Population by Age Group and Gender, FEA 7, Yorkton-Melville

Age Group	Female	Male	Sum Total
0 - 4	1,625	1,535	3,160
5 - 9	1,905	1,890	3,795
10 - 14	2,230	2,225	4,455
15 - 19	2,275	2,230	4,505
20 - 24	1,510	1,325	2,835
25 - 29	1,295	1,330	2,625
30 - 34	1,745	1,855	3,600
35 - 39	2,125	1,995	4,120
40 - 44	2,105	1,985	4,090
45 - 49	1,865	1,905	3,770
50 - 54	1,610	1,595	3,205
55 - 59	1,515	1,575	3,090
60 - 64	1,585	1,645	3,230
65 - 69	1,645	1,710	3,355
70 - 74	1,660	1,800	3,460
75 +	2,900	4,205	7,105
Total	29,595	30,805	60,400

Table S-31: Saskatchewan FEAs, Population by Age Group and Gender, FEA 8, Humboldt

Age Group	Female	Male	Sum Total
0 - 4	730	700	1,430
5 - 9	900	835	1,735
10 - 14	1,125	960	2,085
15 - 19	1,030	945	1,975
20 - 24	695	530	1,225
25 - 29	570	530	1,100
30 - 34	795	810	1,605
35 - 39	975	845	1,820
40 - 44	890	880	1,770
45 - 49	830	740	1,570
50 - 54	645	635	1,280
55 - 59	620	625	1,245
60 - 64	615	630	1,245
65 - 69	665	725	1,390
70 - 74	635	685	1,320
75 +	1,095	1,585	2,680
Total	12,815	12,660	25,475

Table S-32: Saskatchewan FEAs, Population by Age Group and Gender, FEA 9, Melfort-Tisdale-Nipawin

Age Group	Female	Male	Sum Total
0 - 4	1,250	1,205	2,455
5 - 9	1,395	1,425	2,820
10 - 14	1,735	1,525	3,260
15 - 19	1,725	1,570	3,295
20 - 24	1,290	1,060	2,350
25 - 29	960	985	1,945
30 - 34	1,255	1,235	2,490
35 - 39	1,440	1,390	2,830
40 - 44	1,550	1,505	3,055
45 - 49	1,385	1,335	2,720
50 - 54	1,185	1,145	2,330
55 - 59	1,075	1,010	2,085
60 - 64	1,035	995	2,030
65 - 69	1,040	1,120	2,160
70 - 74	990	1,085	2,075
75 +	1,770	2,255	4,025
Total	21,080	20,845	41,925

Table S-33: Saskatchewan FEAs, Population by Age Group and Gender, FEA 10, Prince Albert

Age Group	Female	Male	Sum Total
0 - 4	2,240	2,130	4,370
5 - 9	2,465	2,300	4,765
10 - 14	2,385	2,280	4,665
15 - 19	2,460	2,210	4,670
20 - 24	1,760	1,825	3,585
25 - 29	1,680	1,790	3,470
30 - 34	1,985	2,105	4,090
35 - 39	2,230	2,300	4,530
40 - 44	2,185	2,095	4,280
45 - 49	1,820	1,865	3,685
50 - 54	1,490	1,390	2,880
55 - 59	1,295	1,265	2,560
60 - 64	1,205	1,190	2,395
65 - 69	1,125	1,200	2,325
70 - 74	965	1,050	2,015
75 +	1,460	2,230	3,690
Total	28,750	29,225	57,975

Table S-34: Saskatchewan FEAs, Population by Age Group and Gender, FEA 11, North Battleford-Lloydminster

Age Group	Female	Male	Sum Total
0 - 4	2,750	2,575	5,325
5 - 9	3,055	2,925	5,980
10 - 14	3,330	3,180	6,510
15 - 19	3,240	2,975	6,215
20 - 24	2,400	2,165	4,565
25 - 29	2,080	2,095	4,175
30 - 34	2,660	2,735	5,395
35 - 39	2,895	2,905	5,800
40 - 44	2,735	2,565	5,300
45 - 49	2,315	2,160	4,475
50 - 54	1,790	1,680	3,470
55 - 59	1,550	1,525	3,075
60 - 64	1,590	1,545	3,135
65 - 69	1,430	1,465	2,895
70 - 74	1,260	1,385	2,645
75 +	2,245	3,100	5,345
Total	37,325	36,980	74,305

CHAPTER FOUR: LABOUR MARKETS, RETAIL TRADE AREAS, AND FUNCTIONAL ECONOMIC AREAS IN MANITOBA

Labour Markets and Retail Trade Areas

LMAs for Manitoba were identified using Statistics Canada's place-of-work, place-of-residence data base and the methodology described in Chapter Two. Potential focal points were first selected. These included all PWR, SWR and CSC communities. In addition, some PSCs in remote locations were also used as potential focal points. CSD data were aggregated into existing RM (and Unorganized Division) boundaries. All geographies inside each RM, except for the focal point(s) were considered rural. Commutes were then identified into and out of the focal point to destinations within and outside the RM.

A frequency matrix was created whose dimensions were potential focal points x the number of rural geographies x 2. In Manitoba's case there were 27 potential focal points and 116 rural geographies in the southern agricultural area.

Each rural geography was attached to one of the potential focal points based on the strength of the commuting flows as indicated by the P[R(j)C(i)] statistics discussed in Chapter Two.

Some rural geographies have commuters who travel to more than one potential focal point of course. To resolve the assignment of such rural geographies, a factor analysis program was used to "pair" potential focal points that share commuters in a substantial manner. Urban centres that interact with the same rural space are thus combined to create a single composite focal point where two or more had been hypothesized. Through this process the number of potential focal points were reduced from 27 to 11. In the Winnipeg area, for example, Selkirk, Beausejour, and Stonewall were combined with Winnipeg into a single urban conglomeration.

The final step in defining the spatial structure of Manitoba's LMAs was achieved by using a cluster analysis program to assign rural geographies to the set of composite focal points based on the strength of the commuting flows. Most, but not all, rural geographies were thus assigned. Those rural geographies with a commuting rate of less than five percent of their labour force to a focal point were left unattached. The map in Figure 4 shows 10 of the 11 composite focal points with their rural tributary areas. These geographies are Labour Market Areas. The 11th focal point, Gimli, was incorporated with Winnipeg. Local commuting into Gimli was slightly greater than long distance commuting from the Gimli area into Winnipeg (or other large communities in the Winnipeg composite focal point).

If everything were equal—population density, quality of the highway network, for example–the geographic size of the LMA would reflect the job generating capacity of the focal point communities. Even where there are variations in the economic environment, however, the economic vitality of the focal point(s) is apparent. Thus the Winnipeg LMA is geographically the largest and Brandon is second.

In Table 9, the population of the 10 LMAs is recorded. Variations in population density are apparent in these figures. The five LMAs with the smallest populations are all in western Manitoba while the majority of the LMAs with the largest populations are in eastern Manitoba. Brandon is the only LMA in western Manitoba with a large population. In addition most of the unattached rural space is in western Manitoba.

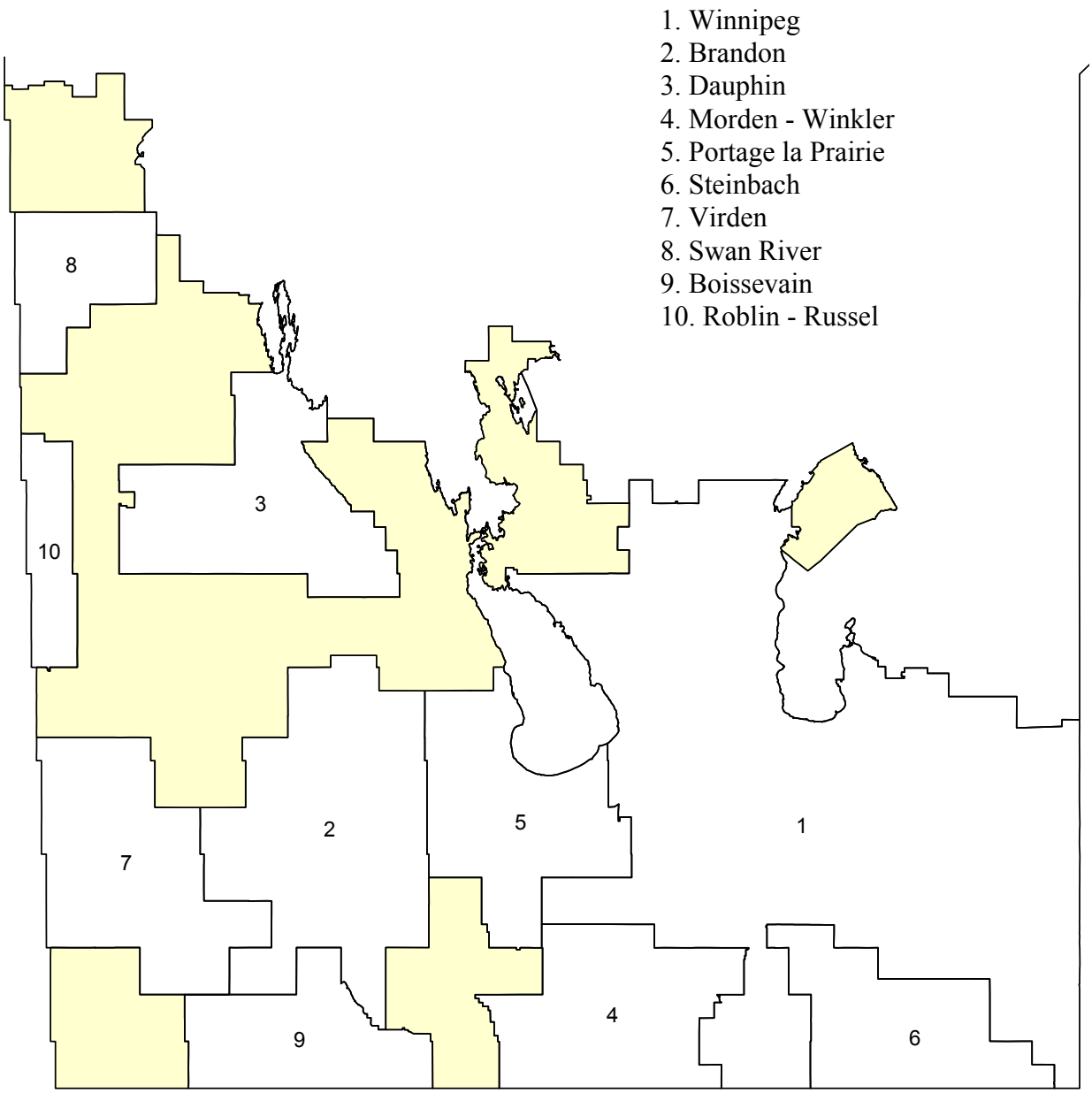

Figure 4. Manitoba Labour Market Areas, 2001

Table 9: Population of Manitoba's LMAs

LMA Name	Population	LMA Number
Winnipeg	787,711	1
Brandon	69,747	2
Morden-Winkler	43,037	3
Portage-la-Prairie	30,148	4
Steinbach	29,188	5
Dauphin	18,484	6
Virden	14,186	7
Boissevain	11,532	8
Swan River	9,673	9
Roblin-Russell	4,385	10

Although Labour Market Areas are useful constructs, they are unsuitable as planning regions particularly in areas of low population density. Labour Market Areas do not incorporate the entire geography, as planning regions should. In addition, focal points in areas of low population density are often too small to provide all of the everyday goods, services and infrastructure that their populations require.

Labour Market Areas are, nevertheless, essential building blocks, along with shopping market areas, in the identification of Functional Economic Areas. FEAs are constructed to be as self contained as possible in terms of employment as well as private and public service delivery.

This description of an FEA obviously portrays a system focussed on a relatively large community. For several decades, service-type urban-based activity has been a major source of job creation while resource-type rural-based activity has either lost jobs in absolute terms or declined relative to most other activities.

Functional Economic Areas

Functional Economic Areas defined on the basis of trading areas and LMAs represent the best approximation to geographically viable regions because employment generated in these FEAs benefits their inhabitants and income earned is (largely) spent within them.

FEAs for Manitoba were defined using journey-to-work data (LMAs) and retail trade areas (Figure 5). The process of identifying them involved imposing the map of retail trade areas drawn around PWR, SWR, and CSC communities over the map of LMAs (Figure 4). In this manner all of southern (agricultural) Manitoba could be included in an FEA with at least a CSC community as its focal point. In addition, all of the previously unassigned rural space in southern Manitoba could be incorporated into an FEA based upon the proximity to the closest focal point for shopping purposes. A few assignments were made because of physical features, road systems, to make the smallest FEAs as large as possible and to avoid irregular boundaries as much as possible.

A map of Manitoba's FEAs is shown in Figure 6. It is apparent than in eastern Manitoba, the size and shape of the FEAs are similar to those of the LMAs. The Portage la Prairie FEA, for example, differs from the LMA only through the addition of two previously unassigned RMs (Victoria and Lorne). The Morden-Winkler FEA represents an extension to the west to include the unattached RM of Louise and an extension in the east to include the RM of Montcalm which was previously included in Winnipeg's LMA. Similarly, the Steinbach FEA was expanded westward to include the RMs of De Salaberry and Franklin, both of which were also previously included in Winnipeg's LMA. This modest truncation of Winnipeg's LMA had the effect of

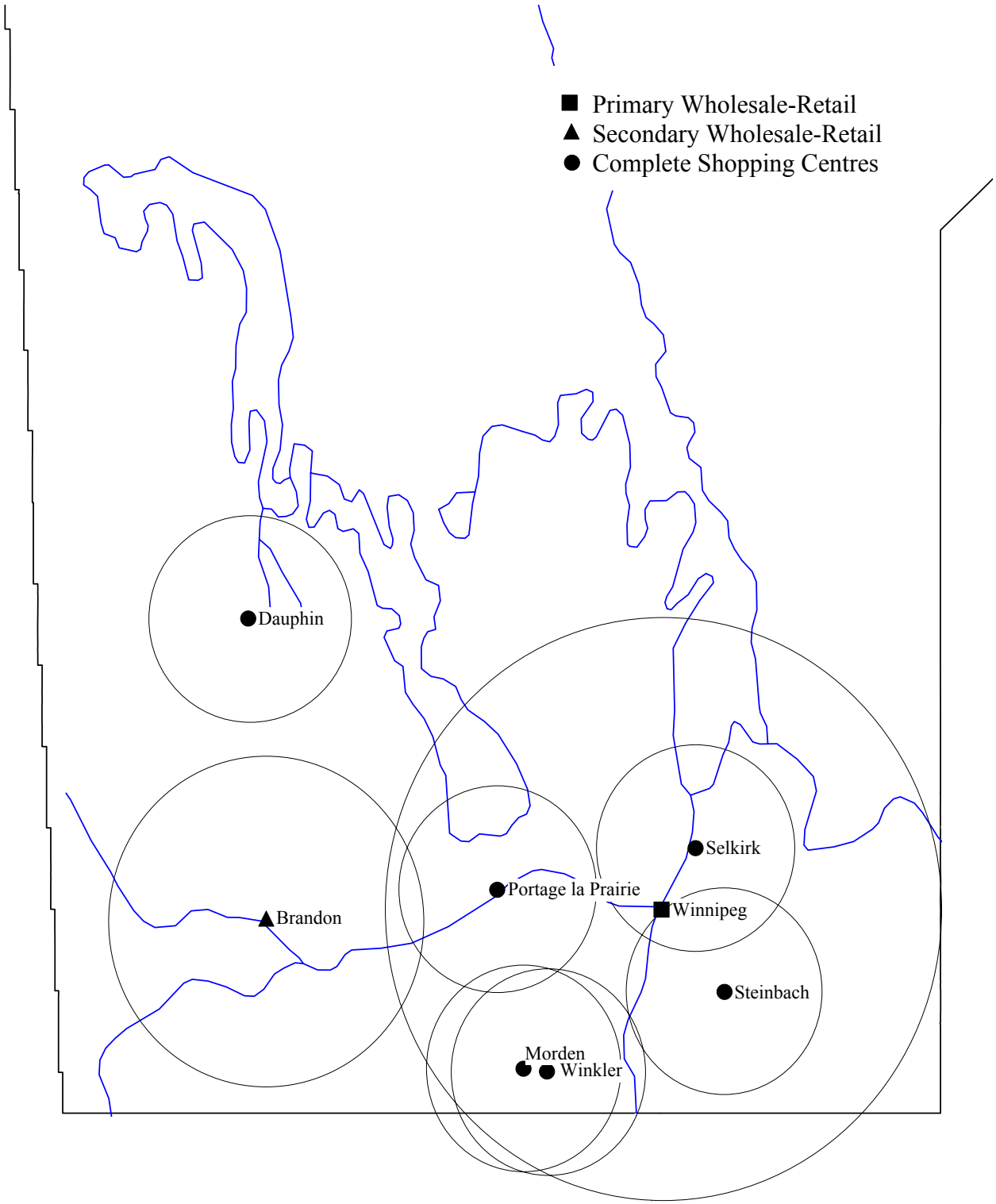

Figure 5. Retail Trade Areas in Manitoba, 2001

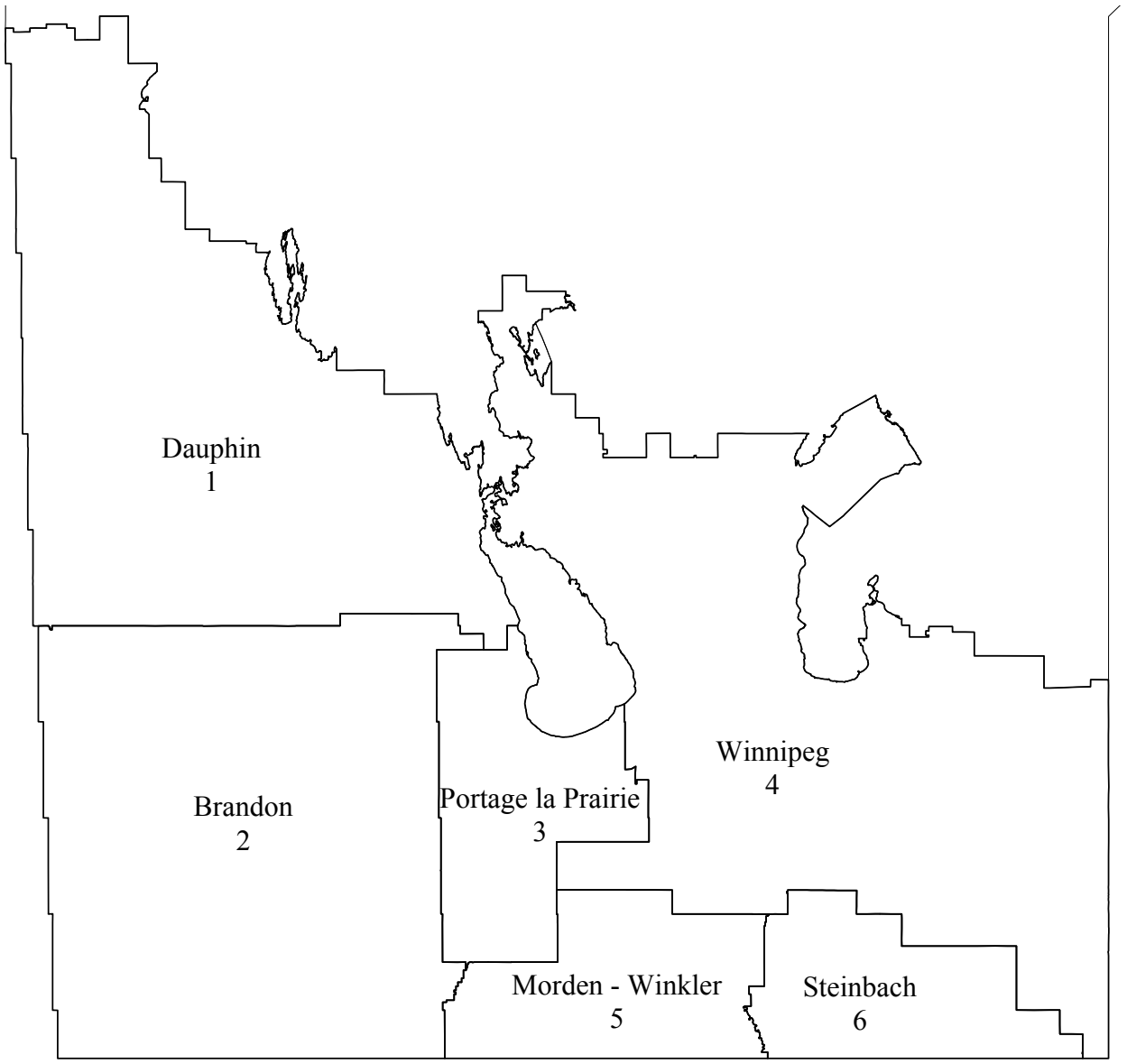

Figure 6. Functional Economic Areas in Manitoba, 2001

enlarging both the geography and the population of the two smaller FEAs and also reducing the irregularity of the shapes of the FEAs in that part of the province. In the case of the RM of Montcalm, there were 65 commutes to focal points in the Winnipeg LMA but there were also 45 commutes to the LMA of Morden-Winkler. For De Salaberry, there were 250 commutes to the Winnipeg LMA and 155 to Steinbach LMA. Franklin had 80 to Winnipeg, 20 to Steinbach, and 10 to Morden-Winkler LMA. Thus each of the re-assigned RMs had secondary commuting ties to the FEA to which they were attached.

In south-western Manitoba, where population density was much lower, all of the focal points other than Brandon were Partial Shopping Centres. Most of these centres are within Brandon's retail trade area and most of the geographies had commuting linkages with Brandon. Thus the LMAs of Virden, Boissevan, and Brandon were combined along with 13 previously unassigned RMs to create the FEA of Brandon.

In sparsely populated north-central-western Manitoba, Dauphin, a CSC, is the dominant centre. Roblin, Russel, and Swan River are all PSCs. These three LMAs plus an approximately equal amount of previously unassigned rural space were combined to create the FEA of Dauphin. Thus, Manitoba ends up with six FEAs, all constructed around focal points of CSC status or higher, with all rural space (in agricultural Manitoba) assigned to an FEA. The total population included in these FEAs is 1,055,928. The remaining unassigned geography of northern Manitoba has a population of 93,976 people.

Except for the Winnipeg FEA, which is actually slightly smaller than its LMA, the FEA populations are greater than those of the LMAs. FEA populations are provided in Table 10. These areas each contain at least one community that can satisfy the requirements for everyday

goods and services and populations large enough to support these activities. They are large enough that most of the labour resident within the FEA is also employed within it.

Table 10: Population of Manitoba's FEAs

FEA Name	Population	FEA Number
Winnipeg	784,509	4
Brandon	108,795	2
Morden-Winkler	47,258	5
Dauphin	46,419	1
Steinbach	34,881	6
Portage la Prairie	34,066	3

The cohesiveness of the FEA system can be measured by reviewing the commuting behaviour of the residents. As a benchmark, the magnitude of commuting flows along with origin and destination of commuters is summarized for all FEAs combined in Table 11. Non-commuters by place of residence and work are shown in Table 12.

For all of Manitoba, there were 93,695 members of the labour force who commuted to work in a CSD other than the one where they were resident. This compares with 422,585 non-commuting members of the labour force. Of these non-commuters, 349, 015 are urban dwellers while 73,570 live in rural areas.

It is useful to identify the nature of the commutes at a provincial level as this defines a provincial average against which the individual FEAs can be compared. Of all commuters, 74,435 people journeyed to a job in the same FEA–that is, 79.4 percent of the Manitoba commutes to work terminated in the FEA of origin. It may also be noted that 13,845 commuters (14.8 percent) journeyed to work to destinations outside the FEA of residence but within Manitoba. Another 5,415 (5.8 percent) left the province to work, 855 to Saskatchewan, 1,070 to Ontario and 3,490 to other destinations.

Table 11. Manitoba's FEA System, Commuting Summary

Place of Work of Commuters									
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Manitoba Communities	Other Manitoba RMs	SK.	ON	Other	Total Commuters
Communities	5,440	13,125	18,565	2,685	2,805	435	715	2,755	27,960
RMs	47,220	8,650	55,870	3,600	4,755	420	355	735	65,735
Regional Sum	52,660	21,775	74,435	6,285	7,560	855	1,070	3,490	93,695

Table 12: Manitoba Non-commuters by Place of Residence-and-Work

		Place of Work		
Functional Economic Area	Place of Residence	Communities	RMs	Total
FEA 1: Dauphin	Communities	2,505	-	2,505
	RMs	-	11,590	11,590
	Total			14,095
FEA 2: Brandon	Communities	23,985	-	23,985
	RMs	-	17,195	17,195
	Total			41,180
FEA 3: Portage la Prairie	Communities	4,900	-	4,900
	RMs	-	7,795	7,795
	Total			12,695
FEA 4: Winnipeg	Communities	307,145	-	307,145
	RMs	-	24,100	24,100
	Total			331,245
FEA 5: Morden-Winkler	Communities	6,865	-	6,865
	RMs	-	7,540	7,540
	Total			14,405
FEA 6: Steinbach	Communities	3,615	-	3,615
	RMs	-	5,350	5,350
	Total			8,965
Summary	Communities	349,015	-	349,015
	RMs	-	73,570	73,570
	Total			422,585

Of the within FEA commuters, the dependence of rural dwellers on employment in the urban economy can be seen in the journeys from rural residences to places of work in focal point communities. Of the 55,870 rural dwellers working within the FEA of residence, 47,220 (84.5 percent) have jobs in urban places. Only 15.5 percent of rural Manitoba's commuters travel to work in a rural setting elsewhere within their FEA.

Commutes from communities within the FEA system to workplaces outside the community of residence are predominantly to a rural setting (70.7 percent) although the numbers are much smaller than commutes originating in rural areas. These urban to rural commutes include many school teachers, nurses, and administrators who live in a larger focal point community but work in one of the small centres too small to be considered a focal point.

Overall, the majority of commuters (70.2 percent) are rural dwellers and most commutes which originate and terminate in Manitoba (94.2 percent), end in an urban centre (66.8 percent).

In Table 13, the characteristics of the commuting patterns of each of Manitoba's six FEAS are individually summarized. Detailed profiles of commuting patterns as well as populations by age and gender are provided for each FEA in the appendix to this chapter.

The statistics in Table 13 reflect some general principles as well as the individual characteristics of each FEA. In column one, for example, a general relationship between size of the urban focal point(s) and percent of the labour force commuting is clear. The FEAs with the largest three focal point communities have the lowest percentages of their labour force commuting. Most of the jobs are in the urban areas and most of their populations live in these communities. At the same time, these three FEAs provide the greatest absolute number of jobs

Table 13: Summary Commuting Characteristics of Individual Manitoba FEAs

	% of LF Commuting	% OOP	% Other Manitoba		% Within FEA	% Within FEA	
			Urban	Rural		Urban	Rural
Winnipeg	14.3	7.0	4.6	6.7	81.7	78.5	21.5
Brandon	23.9	4.8	4.3	7.1	83.7	63.9	36.1
Portage	24.5	2.4	15.1	8.4	74.1	59.3	40.7
Morden-Winkler	34.9	2.7	9.1	6.1	82.1	77.3	22.7
Dauphin	35.7	6.1	4.0	20.6	69.3	14.4	85.6
Steinbach	39.1	2.1	27.1	8.5	62.3	77.4	22.5

for rural commuters. Of the 55,870 rural dwellers in Manitoba commuting to work in the FEA of residence, 39,855 (71.3 percent) find employment in the focal point communities of Winnipeg, Brandon, and Portage FEAs.

Steinbach and Dauphin FEAs represent two extremes. The northwest portion of the Steinbach FEA is close enough to Winnipeg that a substantial percentage of its labour force commutes to Winnipeg. Thus total out commuting is highest of the FEAs and 27 percent of its commuting labour force works in urban places outside the FEA.

Dauphin is the most remote of the FEAs. The possibility of routine commuting to a larger community outside the FEA does not exist. Dauphin, Swan River, Roblin, and Russell are all small centres which provide only limited employment opportunities for commuters. So out commuting from the FEA is high as well. Unlike the other five FEAs, most commuters' destinations are in rural areas both within and outside of the FEA.

The Morden-Winkler FEA is also somewhat distinct. In addition to Winkler and Morden, which are relatively large rural communities, there are also Altona and Carmen. Together the four centres provide an unusual cluster of rural employment opportunities. This shows up in the high percentage of within FEA commutes as well as the high percentage of urban destinations within the FEA.

The viability of the FEA economies is based in large part on the job-generating capacity of larger communities within the region. A growing urban economy will attract commuters from adjacent rural areas as the statistics in the tables indicate. Shopping patterns combined with journey to work permit the assignment of all geographies within a region. The FEAs that emerge represent the most cohesive set of regions that can be designed for Manitoba.

APPENDIX TABLES-MANITOBA

Table M-1. Functional Economic Area: Dauphin

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Manitoba Communities	Other Manitoba RMs	SK.	ON	Other	Total Commuters
Communities	-	3,885	3,885	50	150	55	30	55	4,225
RMs	785	765	1,550	260	1,465	155	125	60	3,615
Regional Sum	785	4,650	5,435	310	1,615	210	155	115	7,840

Table M-2. Functional Economic Area: Brandon

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Manitoba Communities	Other Manitoba RMs	SK.	ON	Other	Total Commuters
Communities	580	1,115	1,695	310	320	75	60	145	2,605
RMs	6,355	2,795	9,150	245	605	175	55	115	10,345
Regional Sum	6,935	3,910	10,845	555	925	250	115	260	12,950

Table M-3. Functional Economic Area: Portage la Prairie

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Manitoba Communities	Other Manitoba RMs	SK.	ON	Other	Total Commuters
Communities	-	645	645	205	85	10	-	30	975
RMs	1,810	595	2,405	415	260	-	10	50	3,140
Regional Sum	1,810	1,240	3,050	620	345	10	10	80	4,115

Table M-4. Functional Economic Area: Winnipeg

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Manitoba Communities	Other Manitoba RMs	SK.	ON	Other	Total Commuters
Communities	3,775	6,045	9,820	1,320	2,045	275	600	2,440	16,500
RMs	31,690	3,680	35,370	1,215	1,670	80	155	335	38,825
Regional Sum	35,465	9,725	45,190	2,535	3,715	355	755	2,775	55,325

Table M-5. Functional Economic Area: Morden-Winkler

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Manitoba Communities	Other Manitoba RMs	SK.	ON	Other	Total Commuters
Communities	1,010	995	2,005	270	85	20	25	60	2,465
RMs	3,880	445	4,325	435	385	-	-	100	5,245
Regional Sum	4,890	1,440	6,330	705	470	20	25	160	7,710

Table M-6. Functional Economic Area: Steinbach

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	RMs	Regional Totals	Other Manitoba Communities	Other Manitoba RMs	SK.	ON	Other	Total Commuters
Communities	75	440	515	530	120	-	-	25	1,190
RMs	2,700	370	3,070	1,030	370	10	10	75	4,565
Regional Sum	2,775	810	3,585	1,560	490	10	10	100	5,755

Table M-7: Manitoba FEAs, Summary

	Totals	% of FEA Pop	% Total Pop
FEA 1	46,419	4.4	4.0
FEA 2	108,795	10.3	9.5
FEA 3	34,066	3.2	3.0
FEA 4	784,509	74.3	68.2
FEA 5	47,258	4.5	4.1
FEA 6	34,881	3.3	3.0
FEA Total	**1,055,928**	**100.0**	**91.8**
Northern	93,976		8.2
Manitoba Total	**1,149,904**		**100.0**

Table M-8: Manitoba FEAs, Population by RMs and Focal Points, by Gender, FEA 1, Dauphin

Focal Points and RMs	Female	Male	Sum Total
Town of Swan River Total	2,638	2,473	5,111
Town of Dauphin Total	4,535	3,959	8,494
Town of Russell Total	939	830	1,769
RM of Alonso-Central Total	637	780	1,417
RM of Alonso-Parkland	465	485	950
RM of Boulton Total	132	169	301
RM of Dauphin Total	922	1,029	1,951
RM of Ethelbert Total	385	432	817
RM of Gilbert Plains Total	841	861	1,702
RM of Grandview Total	883	840	1,723
RM of Hillsburg Total	315	362	677
RM of Lawrence Total	305	337	642
RM of McCreary Total	551	552	1,103
RM of Minitonas Total	718	748	1,466
RM of Mossey River Total	728	775	1,503
RM of Mountain - North Total	581	672	1,253
RM of Mountain - South Total	305	385	690
RM of Ochre River Total	515	549	1,064
RM of Park - Marquette Total	453	514	967
RM of Park - Parkland Total	194	214	408
RM of Rossburn Total	679	666	1,345
RM of Russell Total	485	480	965
RM of Shell River Total	439	488	927
RM of Shellmouth Total	356	368	724
RM of Silver Creek Total	268	309	577
RM of Ste Rose Total	1,009	1,038	2,047
RM of Swan River Total	1,529	1,567	3,096
Unorg. Territories - Parkland Total	1,298	1,432	2,730
TOTALS	23,105	23,314	46,419

Table M-9: Manitoba FEAs, Population by RMs and Focal Points, by Gender, FEA 2, Brandon

Focal Points and RMs	Female	Male	Sum Total
City of Brandon Total	22,163	20,228	42,391
Town of Boissevain Total	801	772	1,573
Town of Carberry Total	915	808	1,723
Town of Killarney Total	1,224	1,071	2,295
Town of Minnedosa Total	1,561	1,463	3,024
Town of Neepawa Total	1,914	1,671	3,585
Town of Roblin Total	1,086	982	2,068
Town of Souris Total	906	760	1,666
Town of Virden Total	1,641	1,394	3,035
RM of Albert Total	175	190	365
RM of Archie Total	176	224	400
RM of Argyle Total	556	602	1,158
RM of Arthur Total	903	880	1,783
RM of Birtle Total	799	765	1,564
RM of Blanshard Total	310	332	642
RM of Brenda Total	441	452	893
RM of Cameron Total	468	480	948
RM of Clanwilliam Total	586	586	1,172
RM of Cornwallis Total	1,608	1,264	2,872
RM of Daly Total	1,024	961	1,985
RM of Edward Total	353	344	697
RM of Ellice Total	399	418	817
RM of Elton Total	649	686	1,335
RM of Glenella Total	274	302	576
RM of Glenwood Total	268	288	556
RM of Hamiota Total	694	670	1,364
RM of Harrison Total	468	437	905
RM of Langford Total	298	319	617
RM of Lansdowne Total	424	473	897
RM of Miniota Total	528	570	1,098
RM of Minto Total	177	204	381
RM of Morton Total	352	393	745
RM of North Cypress Total	744	812	1,556
RM of Oakland Total	712	707	1,419
RM of Odanah Total	200	229	429
RM of Pipestone Total	904	902	1,806
RM of Riverside Total	427	431	858

RM of Roblin Total	632	651	1,283
RM of Rosedale Total	765	888	1,653
RM of Saskatchewan Total	525	551	1,076
RM of Shoal Lake Total	732	733	1,465
RM of Sifton Total	706	716	1,422
RM of South Cypress Total	672	697	1,369
RM of Strathclair Total	543	558	1,101
RM of Strathcona Total	317	332	649
RM of Turtle Mountain Total	502	577	1,079
RM of Wallace Total	1,117	1,174	2,291
RM of Whitehead Total	391	462	853
RM of Whitewater Total	382	379	761
RM of Winchester Total	844	787	1,631
RM of Woodworth Total	467	497	964
FEA population total	55,723	53,072	108,795

Table M-10: Manitoba FEAs, Population by RMs and Focal Points, by Gender, FEA 3, Portage la Prairie

Focal Points and RMs	Female	Male	Sum Total
City of Portage la Prairie Total	7,333	6,619	13,952
RM of Lakeview Total	209	221	430
RM of Lorne Total	1,242	1,300	2,542
RM of North Norfolk Total	2,009	2,167	4,176
RM of Portage la Prairie Total	2,973	3,148	6,121
RM of South Norfolk Total	1,310	1,319	2,629
RM of Victoria Total	661	715	1,376
RM of Westbourne Total	1,441	1,399	2,840
FEA population total	17,178	16,888	34,066

Table M-11: Manitoba FEAs, Population by RMs and Focal Points, by Gender, FEA 4, Winnipeg

Focal Points and RMs	Female	Male	Sum Total
City of Wpg - North Total	329,168	311,127	640,295
Town of Arborg Total	796	751	1,547
Town of Beausejour Total	2,151	1,987	4,138
Town of Gimli Total	1,059	898	1,957
Town of Selkirk Total	5,119	4,691	9,810
Town of Ste Anne Total	1,222	1,208	2,430
Town of Stonewall Total	2,235	2,159	4,394
RM of Alexander Total	2,010	2,075	4,085
RM of Bifrost Total	1,573	1,694	3,267
RM of Brokenhead Total	1,184	1,308	2,492
RM of Eriksdale Total	485	493	978
RM of Fisher Total	1,320	1,351	2,671
RM of Gimli Total	2,114	2,184	4,298
RM of Grahamdale Total	1,012	1,070	2,082
RM of Grey Total	1,395	1,463	2,858
RM of Lac du Bonnet Total	1,872	1,935	3,807
RM of Armstrong Total	789	890	1,679
RM of Coldwell Total	612	689	1,301
RM of East St Paul Total	3,564	3,671	7,235
RM of Cartier Total	1,425	1,505	2,930
RM of Headingley Total	909	1,251	2,160
RM of MacDonald Total	2,600	2,747	5,347
RM of Reynolds Total	569	623	1,192
RM of Ritchot Total	2,408	2,533	4,941
RM of Rockwood Total	3,954	4,134	8,088
RM of Rosser Total	582	638	1,220
RM of Siglunes Total	857	916	1,773
RM of Springfield Total	6,070	6,356	12,426
RM of St Andrews Total	6,280	6,524	12,804
RM of St Clements Total	3,004	3,211	6,215
RM of St Francois Xavier Total	453	462	915
RM of St Laurent Total	607	663	1,270
RM of Ste Anne Total	1,894	1,983	3,877
RM of Tache Total	3,645	3,880	7,525
RM of Victoria Beach Total	135	125	260
RM of West St Paul Total	2,046	1,864	3,910
RM of Whitemouth Total	879	913	1,792

RM of Woodlands Total	1,711	1,778	3,489
Unorg. Territories - South Eastman Total	199	372	571
Unorg. Territories - Interlake Total	335	344	679
FEA population total	400,216	384,293	784,509

Table M-12: Manitoba FEAs, Population by RMs and Focal Points, by Gender, FEA 5, Morden-Winkler

Focal Points and RMs	Female	Male	Sum Total
Town of Altona Total	1,952	1,803	3,755
Town of Carman Total	1,605	1,462	3,067
Town of Morden Total	3,328	3,120	6,448
Town of Morris Total	887	814	1,701
Town of Winkler Total	5,061	4,977	10,038
RM of Dufferin Total	1,083	1,215	2,298
RM of Louise Total	1,118	1,060	2,178
RM of Montcalm Total	1,015	1,028	2,043
RM of Morris Total	1,478	1,487	2,965
RM of Pembina Total	1,321	1,324	2,645
RM of Rhineland Total	2,284	2,429	4,713
RM of Roland Total	441	450	891
RM of Stanley Total	1,621	1,722	3,343
RM of Thompson Total	606	567	1,173
FEA population total	23,800	23,458	47,258

Table M-13: Manitoba FEAs, Population by RMs and Focal Points, by Gender, FEA 6, Steinbach

Focal Points and RMs	Female	Male	Sum Total
City of Steinbach Total	6,479	6,225	12,704
Town of Niverville Total	1,022	1,070	2,092
RM of De Salaberry Total	1,797	1,801	3,598
RM of Franklin Total	1,025	1,070	2,095
RM of Hanover Total	4,448	4,688	9,136
RM of La Broquerie Total	870	1,058	1,928
RM of Piney Total	797	951	1,748
RM of Stuartburn Total	781	799	1,580
FEA population total	17,219	17,662	34,881

Table M-14: Manitoba FEAs, Population by Age Group and Gender, FEA 1, Dauphin

Age Group	Female	Male	Sum Total
Under 1	261	269	530
1 - 4	1,047	1,093	2,140
5 - 9	1,503	1,581	3,084
10 - 14	1,567	1,729	3,296
15 - 19	1,575	1,743	3,318
20 - 24	1,337	1,446	2,783
25 - 29	1,184	1,284	2,468
30 - 34	1,233	1,269	2,502
35 - 39	1,546	1,606	3,152
40 - 44	1,567	1,623	3,190
45 - 49	1,591	1,620	3,211
50 - 54	1,429	1,474	2,903
55 - 59	1,276	1,309	2,585
60 - 64	1,045	1,175	2,220
65 - 69	1,095	1,085	2,180
70 - 74	1,123	1,073	2,196
75 +	2,726	1,935	4,661
Total	23,105	23,314	46,419

Table M-15: Manitoba FEAs, Population by Age Group and Gender, FEA 2, Brandon

Age Group	Female	Male	Sum Total
Under 1	596	631	1,227
1 - 4	2,538	2,621	5,159
5 - 9	3,598	3,742	7,340
10 - 14	3,959	4,113	8,072
15 - 19	3,898	4,109	8,007
20 - 24	3,471	3,579	7,050
25 - 29	3,243	3,188	6,431
30 - 34	3,165	3,027	6,192
35 - 39	4,099	3,809	7,908
40 - 44	4,168	4,067	8,235
45 - 49	3,697	3,816	7,513
50 - 54	3,356	3,316	6,672
55 - 59	2,673	2,603	5,276
60 - 64	2,445	2,306	4,751
65 - 69	2,299	2,065	4,364
70 - 74	2,360	2,195	4,555
75 +	6,158	3,885	10,043
Total	55,723	53,072	108,795

Table M-16: Manitoba FEAs, Population by Age Group and Gender, FEA 3, Portage la Prairie

Age Group	Female	Male	Sum Total
Under 1	239	224	463
1 - 4	881	971	1,852
5 - 9	1,248	1,346	2,594
10 - 14	1,314	1,366	2,680
15 - 19	1,346	1,439	2,785
20 - 24	1,064	1,094	2,158
25 - 29	1,010	1,004	2,014
30 - 34	974	1,013	1,987
35 - 39	1,291	1,185	2,476
40 - 44	1,274	1,347	2,621
45 - 49	1,115	1,121	2,236
50 - 54	996	1,009	2,005
55 - 59	815	801	1,616
60 - 64	675	678	1,353
65 - 69	657	624	1,281
70 - 74	667	612	1,279
75 +	1,612	1,054	2,666
Total	17,178	16,888	34,066

Table M-17: Manitoba FEAs, Population by Age Group and Gender, FEA 4, Winnipeg

Age Group	Female	Male	Sum Total
Under 1	4,328	4,568	8,896
1 - 4	18,438	19,617	38,055
5 - 9	26,020	27,179	53,199
10 - 14	25,839	27,366	53,205
15 - 19	25,249	26,393	51,642
20 - 24	25,827	25,811	51,638
25 - 29	26,397	26,463	52,860
30 - 34	27,712	27,569	55,281
35 - 39	33,345	33,719	67,064
40 - 44	32,422	32,583	65,005
45 - 49	30,061	29,158	59,219
50 - 54	26,204	25,473	51,677
55 - 59	19,282	19,112	38,394
60 - 64	15,924	14,986	30,910
65 - 69	15,118	13,791	28,909
70 - 74	14,723	11,550	26,273
75 +	33,327	18,955	52,282
Total	400,216	384,293	784,509

Table M-18: Manitoba FEAs, Population by Age Group and Gender, FEA 5, Morden-Winkler

Age Group	Female	Male	Sum Total
Under 1	319	335	654
1 - 4	1,381	1,447	2,828
5 - 9	1,891	1,959	3,850
10 - 14	1,896	1,976	3,872
15 - 19	1,944	2,060	4,004
20 - 24	1,637	1,760	3,397
25 - 29	1,403	1,461	2,864
30 - 34	1,447	1,493	2,940
35 - 39	1,689	1,611	3,300
40 - 44	1,618	1,696	3,314
45 - 49	1,432	1,515	2,947
50 - 54	1,179	1,271	2,450
55 - 59	1,023	1,005	2,028
60 - 64	871	845	1,716
65 - 69	816	730	1,546
70 - 74	951	776	1,727
75 +	2,303	1,518	3,821
Total	23,800	23,458	47,258

Table M-19: Manitoba FEAs, Population by Age Group and Gender, FEA 6, Steinbach

Age Group	Female	Male	Sum Total
Under 1	258	257	515
1 - 4	1,087	1,132	2,219
5 - 9	1,449	1,559	3,008
10 - 14	1,440	1,525	2,965
15 - 19	1,335	1,524	2,859
20 - 24	1,186	1,301	2,487
25 - 29	1,151	1,183	2,334
30 - 34	1,195	1,239	2,434
35 - 39	1,316	1,400	2,716
40 - 44	1,197	1,276	2,473
45 - 49	1,096	1,083	2,179
50 - 54	871	921	1,792
55 - 59	733	771	1,504
60 - 64	624	615	1,239
65 - 69	545	574	1,119
70 - 74	519	468	987
75 +	1,217	834	2,051
Total	17,219	17,662	34,881

CHAPTER FIVE: LABOUR MARKETS, RETAIL TRADE AREAS, AND FUNCTIONAL ECONOMIC AREAS IN ALBERTA

Labour Markets and Retail Trade Areas

LMAs for Alberta were identified using Statistics Canada's place-of-work, place-of-residence data base and the methodology described in Chapter Two. Potential focal points were first selected. These included all PWR, SWR and CSC communities. In addition, some PSCs and FCCs in remote locations were used as potential focal points. CSD data were aggregated first into Alberta's old structure of rural municipalities and subsequently into the present administrative structure of counties, improvement districts, etc. Commutes were then identified into and out of the potential focal points to destinations within and outside the administrative subdivisions.

A frequency matrix was created whose dimensions were potential focal points x the number of rural geographies x 2. In Alberta's case there were 75 potential focal points and 61 rural geographies in the southern agricultural area.

Each rural geography was attached to one of the potential focal points based on the strength of the commuting flows as indicated by the P[R(j)C(i)] statistics discussed in Chapter Two.

Some rural geographies have commuters who travel to more than one potential focal point of course. To resolve the assignment of such rural geographies, a factor analysis program was used to "pair" potential focal points that share commuters in a substantial manner. Urban centres that interact with the same rural space are thus combined to create a single composite focal point where two or more had been hypothesized. Through this process the number of potential focal points were reduced from 75 to 21. In the Red Deer area, for example, Innisfail, Lacombe, and Sylvan Lake were combined with Red Deer into a single urban conglomeration.

The final step in defining the spatial structure of Alberta's LMAs was achieved by using a cluster analysis program to assign rural geographies to the set of composite focal points based on the strength of the commuting flows. Most, but not all, rural geographies were thus assigned. Those rural geographies with a commuting rate of less than five percent of their labour force to a focal point were left unattached. The map in Figure 7 shows the 21 composite focal points with their rural tributary areas. These geographies are Labour Market Areas. The shaded areas identify remote geographies which did not attach to any urban focal point.

If everything were equal—population density, quality of the highway network, for example—the geographic size of the LMA would reflect the job generating capacity of the focal point communities. Thus within the corridor, Calgary and Edmonton's LMAs are geographically large while those for Fort Macleod, Red Deer and Wetaskiwin, for example, are small. In sparsely populated western and eastern Alberta, LMAs are geographically larger, because the limited number of employment centres compels commuters to drive greater distances.

In Table 14, the population of the 21 LMAs is recorded. Variations in population density are apparent in these figures. The seven LMAs with the smallest populations are all outside the corridor while the three LMAs with the largest populations form the heart of the corridor and account for 74 percent of the population of the 21 LMAs.

Although labour Market Areas are useful constructs, they are unsuitable as planning regions particularly in areas of low population density. Labour Market Areas do not incorporate the entire geography, as planning regions should. In addition, focal points in areas of low

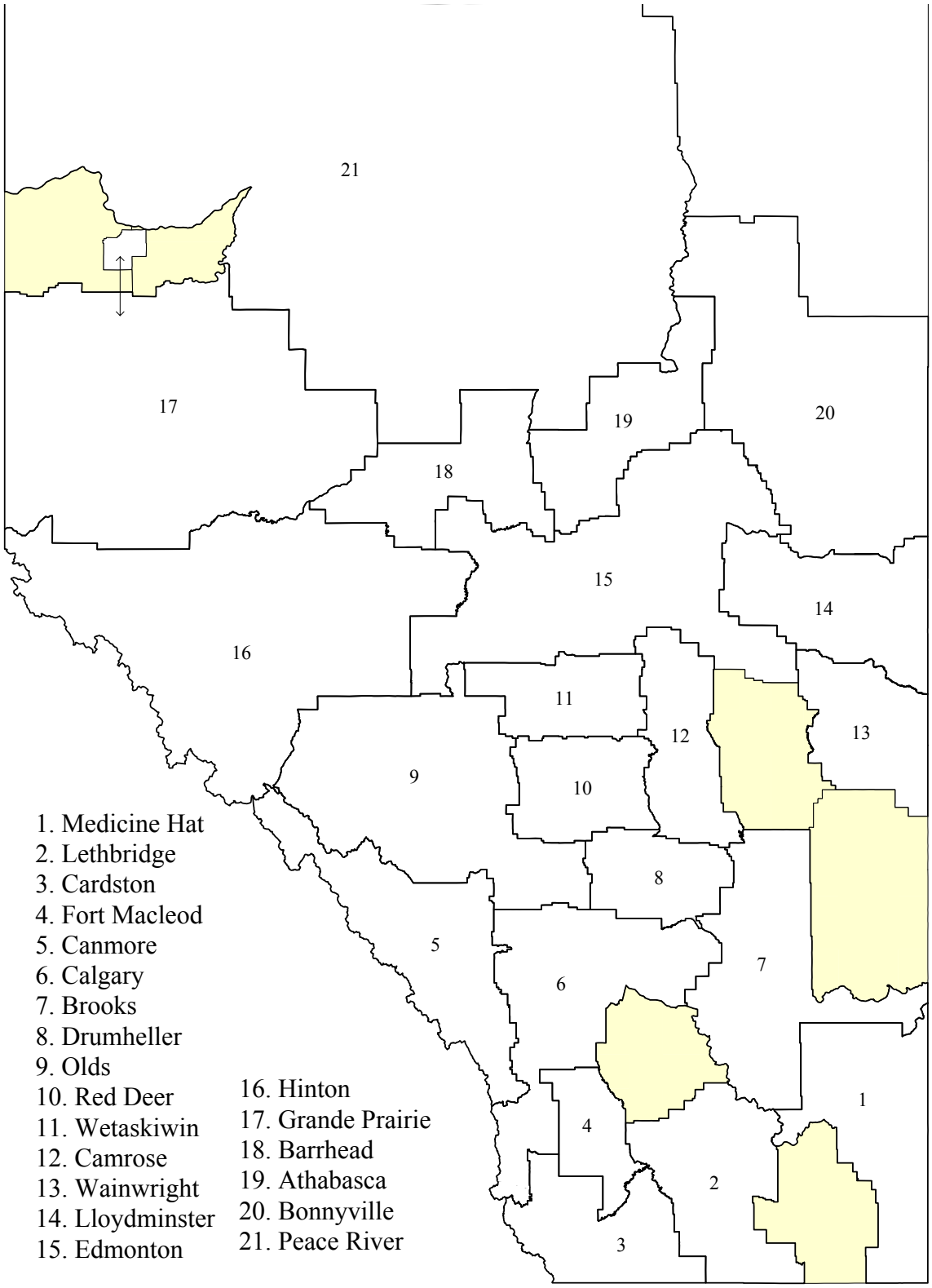

Figure 7. Alberta Labour Market Areas, 2001

Table 14: Population of Alberta's LMAs

LMA Name	Population	LMA Number
Medicine Hat	56,575	1
Lethbridge	102,965	2
Cardston	20,775	3
Fort Macleod	14,070	4
Canmore	17,935	5
Calgary	879,160	6
Brooks	24,715	7
Drumheller	21,315	8
Olds	42,110	9
Red Deer	116,510	10
Wetaskiwin	40,255	11
Camrose	35,245	12
Wainwright	15,680	13
Lloydminster	38,560	14
Edmonton	911,965	15
Hinton	31,860	16
Grand Prairie	67,180	17
Barrhead	23,595	18
Athabaska	23,390	19
Bonnyville	47,790	20
Peace River	54,860	21

population density are often too small to provide all of the everyday goods, services and infrastructure that their populations require.

Labour Market Areas are, nevertheless, essential building blocks, along with shopping market areas, in the identification of Functional Economic Areas. FEAs are constructed to be as self contained as possible in terms of employment as well as private and public service delivery.

This description of an FEA obviously portrays a system focussed on a relatively large community. For several decades, service-type urban-based activity has been a major source of job creation while resource-type rural-based activity has either lost jobs in absolute terms or declined relative to most other activities.

Functional Economic Areas defined on the basis of trading areas and LMAs represent the best approximation to geographically viable regions because employment generated in these FEAs benefits (primarily) their inhabitants and income earned is (largely) spent within them.

Functional Economic Areas

FEAs for Alberta were defined using journey-to-work data (LMAs) and retail trade areas (Figure 8). The process of identifying them involved imposing the map of retail trade areas drawn around PWR, SWR, and CSC communities over the map of LMAs (Figure 7). In this manner, all of the previously unassigned rural space in southern Alberta is incorporated into an FEA based upon the proximity to the closest focal point for shopping purposes. All focal points except Bonnyville and Hinton (which are PSCs) are CSCs or higher. A few assignments were made because of physical features, road systems, to make the smallest FEAs as large as possible and to avoid irregular boundaries as much as possible.

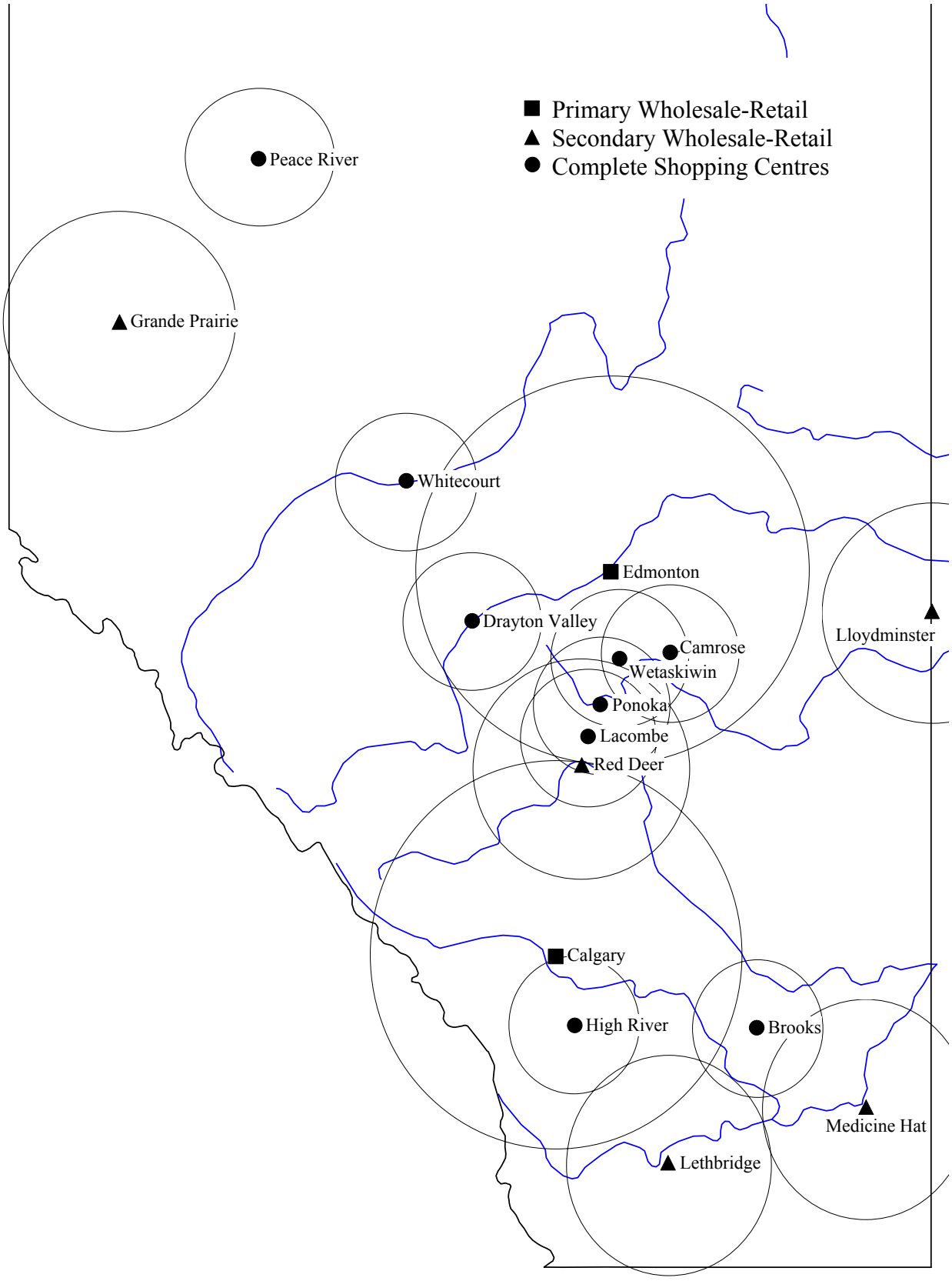

Figure 8. Retail Trade Areas in Alberta, 2001

A map of Alberta's 10 FEAs is shown in Figure 9. The FEAs of Bonnyville, Peace River, and Hinton are identical to their LMAs, while the FEA of Grande Prairie has been enlarged slightly to incorporate the two previously unattached rural geographies of Birch Hills and Saddler Hills. Elsewhere in Alberta, FEAs were formed by combining two or more small LMAs to form viable units and incorporate the geographies that were unattached when LMAs were formed . The FEAs of Lloydminster, Medicine Hat and Lethbridge were created in this manner. Finally, Edmonton, Calgary and Red Deer were expanded to incorporate the small LMAs and unattached rural spaces on their peripheries. In the case of the Wetaskiwin LMA, which consists of Wetaskiwin and Ponoka counties, the LMAs were split in forming FEAs. Ponoka county was included in the Red Deer FEA and Wetaskiwin became part of the Edmonton FEA. The Camrose FEA was split in a similar fashion with Camrose County incorporated in the Edmonton FEA, while Stettler County was incorporated into the Red Deer FEA. The FEA populations are recorded in Table 15. Ninety-seven percent of Alberta's population lives in the 10 FEAs. An additional three percent, 78,560 people, live in northern areas not included in the FEA system.

The cohesiveness of the FEA system can be measured by reviewing the commuting behaviour of the residents. As a benchmark, the magnitude of commuting flows along with origin and destination of commuters is summarized for all FEAs combined in Table 16. Non-commuters by place of residence and work are shown in Table 17.

For all of Alberta, there were 227,890 members of the labour force who commuted to work in a CSD other than the one where they were resident. This compares with 1,137,055 non-commuting members of the labour force. Of these non-commuters, 959,110 are urban dwellers while 177,945 live in rural areas.

Table 15: Population of Alberta's FEAs

FEA Name	Population	FEA Number
Peace River	54,860	1
Grande Prairie	71,575	2
Bonnyville	47,790	3
Hinton	31,860	4
Edmonton	1,015,780	5
Lloydminster	137,810	6
Red Deer	191,355	7
Calgary	919,415	8
Lethbridge	137,610	9
Medicine Hat	90,805	10

It is useful to identify the nature of the commutes at a provincial level as this defines a provincial average against which the individual FEAs can be compared. Of all commuters, 183,970 people journeyed to a job in the same FEA–that is, 80.7 percent of the Alberta commutes to work terminated in the FEA of origin.

It may also be noted that 28,455 commuters (12.5 percent) journeyed to work to destinations outside the FEA of residence but within Alberta. Another 15,465 (6.8 percent) left the province to work, 4,145 to Saskatchewan, 5,385 to B.C. 5,935 to other destinations.

Of the within FEA commuters, the dependence of rural dwellers on employment in the urban economy can be seen in the journeys from rural residences to places of work in focal point communities. Of the 127,085 rural dwellers working within the FEA of residence, 119,545 (94.1 percent) have jobs in urban focal points. Only 5.9 percent of rural Alberta's commuters travel to work in another rural setting within their FEA of residence.

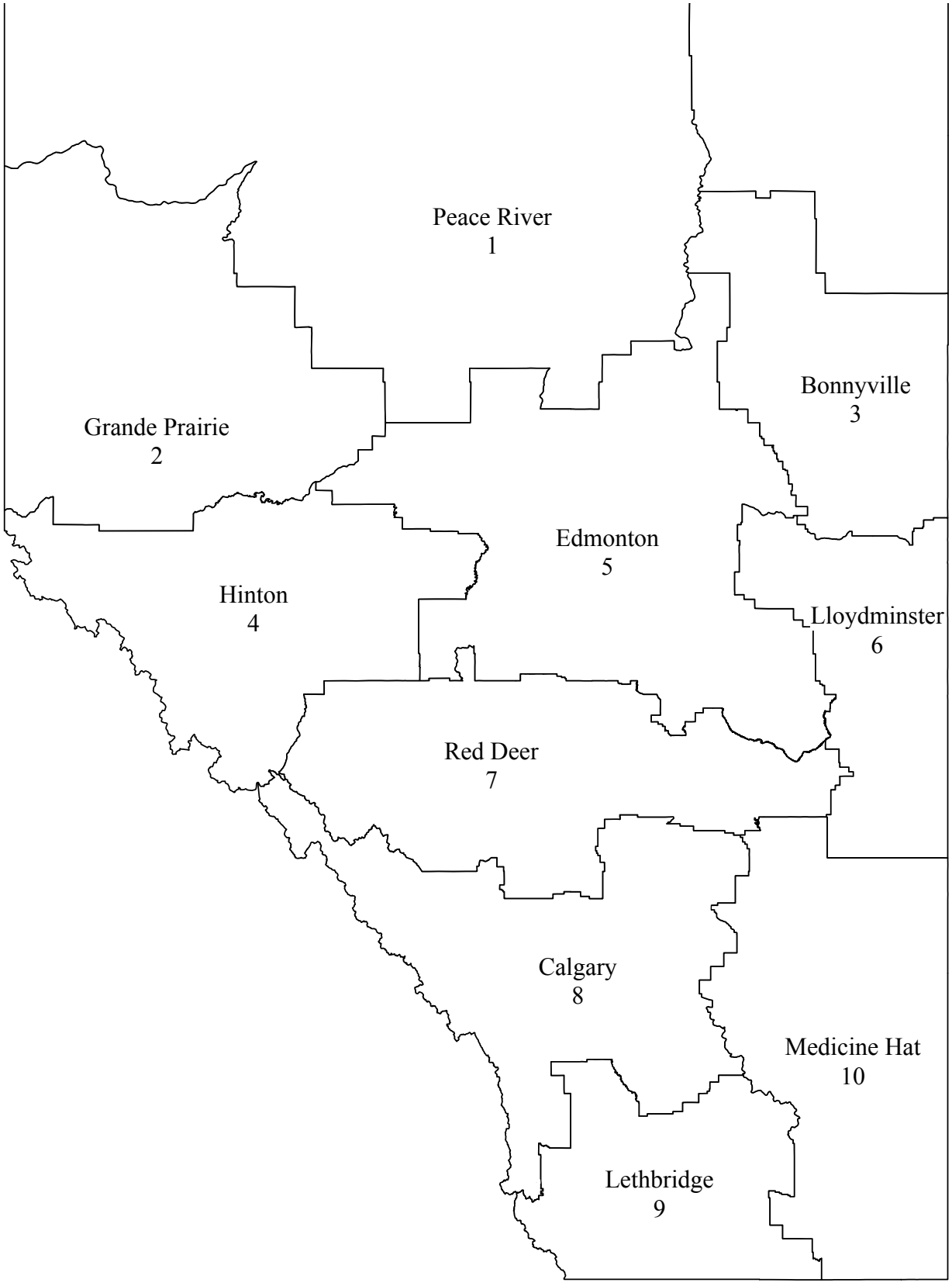

Figure 9. Functional Economic Areas in Alberta, 2001

Table 16: Alberta's FEA System, Commuting Summary

Place of Work of Commuters									
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other Alberta Communities	Other Alberta Rural Areas	BC	SK	Other	Total Commuters
Communities	15,075	41,810	56,885	11,415	5,670	4,325	3,290	5,095	86,680
Rural Areas	119,545	7,540	127,085	7,195	4,175	1,060	855	840	141,210
Regional Sum	134,620	49,350	183,970	18,610	9,845	5,385	4,145	5,935	227,890

Table 17: Alberta Non-commuters by Place of Residence-and-Work

Functional Economic Area	Place of Residence	Place of Work: Communities	Rural Areas	Total
FEA 1: Peace River	Communities	10,460	-	10,460
	Rural Areas	-	11,350	11,350
	Total			21,810
FEA 2: Grande Prairie	Communities	19,565	-	19,565
	Rural Areas	-	8,590	8,590
	Total			28,155
FEA 3: Bonnyville	Communities	7,260	-	7,260
	Rural Areas	-	7,755	7,755
	Total			15,015
FEA 4: Hinton	Communities	7,075	-	7,075
	Rural Areas	-	5,500	5,500
	Total			12,575
FEA 5: Edmonton	Communities	367,820	-	367,820
	Rural Areas	-	58,065	58,065
	Total			425,885
FEA 6: Lloydminster	Communities	10,650	-	10,650
	Rural Areas	-	10,695	10,695
	Total			21,345
FEA 7: Red Deer	Communities	42,310	-	42,310
	Rural Areas	-	22,075	22,075
	Total			64,385
FEA 8: Calgary	Communities	429,045	-	429,045
	Rural Areas	-	26,445	26,445
	Total			455,490
FEA 9: Lethbridge	Communities	37,555	-	37,555
	Rural Areas	-	16,505	16,505
	Total			54,060
FEA 10: Medicine Hat	Communities	27,370	-	27,370
	Rural Areas	-	10,965	10,965
	Total			38,335
Summary	Communities	959,110	-	959,110
	Rural Areas	-	177,945	177,945
	Total			1,137,055

Commutes from communities within the FEA system to workplaces outside the community of residence are predominantly to a rural setting (73.5 percent) although the numbers are much smaller than commutes originating in rural areas. These urban-to-rural commutes include many school teachers, nurses, and administrators who live in a larger focal point community but work in one of the small centres too small to be considered a focal point.

Overall, the majority of commuters (62.0 percent) are rural dwellers and most of the total commutes which originate and terminate in Alberta (93.2 percent), end in an urban centre (72.1 percent).

In Table 18, the characteristics of the commuting patterns of each of Alberta's 10 FEAs are individually summarized. Detailed profiles of commuting patterns as well as populations by age and gender are provided for each FEA in the appendix to this chapter.

The statistics in Table 18 reflect some general principles as well as the individual characteristics of each FEA. In column one, for example, a general relationship between size of the urban focal point(s) and percent of the labour force commuting is clear. Calgary, Edmonton and Medicine Hat have the lowest percentages of their labour forces commuting. Most of the jobs in these FEAs are in the urban areas and most of their populations live in these communities. At the same time, Calgary and Edmonton provide the greatest absolute number of jobs for rural commuters. Of the 127,085 rural dwellers in Alberta commuting to work in the FEA of residence, 73,565 (57.8 percent) find employment in the focal point communities of Calgary and Edmonton FEAs.

A couple of FEAs whose characteristics differ from the overall pattern require a word of explanation. In the Lloydminster FEA, the percentage of commuters to out-of-province

Table 18: Summary Commuting Characteristics of Individual Alberta FEAs

	% of LF Commuting	% OOP	% Other Alberta		% Within FEA	% Within FEA	
			Urban	Rural		Urban	Rural
Calgary	8.1	13.2	8.7	3.9	74.1	74.9	25.1
Medicine Hat	15.8	7.3	10.8	3.3	78.6	55.9	44.1
Edmonton	18.3	5.2	6.7	4.1	84.0	70.3	29.7
Lethbridge	23.0	3.6	8.9	4.0	83.5	76.0	24.0
Peace River	24.2	2.5	7.3	4.5	85.7	82.3	17.7
Hinton	25.6	6.2	13.5	7.6	72.7	53.8	46.2
Grande Prairie	25.7	5.7	7.3	2.6	84.5	71.5	28.5
Lloydminster	27.5	24.7	8.0	8.0	59.3	78.8	21.2
Red Deer	32.5	2.6	11.4	4.3	81.7	81.8	18.2
Bonnyville	37.2	3.2	5.4	7.0	84.4	74.9	25.1

destinations is unusually high and the percentage of commutes terminating within the FEA is low. Most of these commutes are actually within the urban area, although across the provincial boundary into Saskatchewan. If the city of Lloydminster were entirely within Alberta the out-of-province commutes would be much lower.

Hinton's commuting patterns also differ from the general pattern with a high percentage of commutes to other urban centres in Alberta and a relatively low percentage of within FEA commutes terminating in an urban centre. These statistics can be attributed to the relatively low job generating capacity of its focal point community.

In the case of Medicine Hat, the high percentage of within FEA commutes terminating in rural areas can be partly attributed to Medicine Hat residents traveling to work in the military base just north of the city.

The viability of the FEA economies is based in large part on the job-generating capacity of larger communities within the region. A growing urban economy will attract commuters from adjacent rural areas as the statistics in the tables indicate. Shopping patterns combined with journey to work permit the assignment of all geographies within a region. The FEAs that emerge represent the most cohesive set of regions that can be designed for Alberta.

APPENDIX TABLES-ALBERTA

Table A-1. Functional Economic Area: Peace River

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	520	740	1,260	170	130	10	20	35	1,625
Rural Areas	4,390	315	4,705	335	185	50	40	20	5,335
Regional Sum	4,910	1,055	5,965	505	315	60	60	55	6,960

Table A-2. Functional Economic Area: Grande Prairie

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	295	1,745	2,040	440	180	210	25	90	2,985
Rural Areas	5,575	595	6,170	265	75	195	-	30	6,735
Regional Sum	5,870	2,340	8,210	705	255	405	25	120	9,720

Table A-3. Functional Economic Area: Bonnyville

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	400	1,795	2,195	185	165	25	75	50	2,695
Rural Areas	5,230	90	5,320	300	455	20	60	55	6,210
Regional Sum	5,630	1,885	7,515	485	620	45	135	105	8,905

Table A-4. Functional Economic Area: Hinton

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	40	1,405	1,445	240	55	70	40	30	1,880
Rural Areas	1,655	50	1,705	345	275	85	-	45	2,455
Regional Sum	1,695	1,455	3,150	585	330	155	40	75	4,335

Table A-5. Functional Economic Area: Edmonton

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	1,905	19,700	21,605	4,295	2,690	1,520	505	2,125	32,740
Rural Areas	54,350	4,055	58,405	2,090	1,200	285	120	360	62,460
Regional Sum	56,255	23,755	80,010	6,385	3,890	1,805	625	2,485	95,200

Table A-6. Functional Economic Area: Lloydminster

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	145	830	975	230	175	30	1,485	55	2,950
Rural Areas	3,635	185	3,820	420	475	20	390	15	5,140
Regional Sum	3,780	1,015	4,795	650	650	50	1,875	70	8,090

Table A-7. Functional Economic Area: Red Deer

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	5,200	3,740	8,940	1,460	550	255	165	100	11,470
Rural Areas	15,520	875	16,395	2,085	775	130	60	110	19,555
Regional Sum	20,720	4,615	25,335	3,545	1,325	385	225	210	31,025

Table A-8. Functional Economic Area: Calgary

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	3,160	6,825	9,985	2,985	1,330	1,890	660	2,405	19,255
Rural Areas	19,215	685	19,900	545	250	150	85	155	21,085
Regional Sum	22,375	7,510	29,885	3,530	1,580	2,040	745	2,560	40,340

Table A-9. Functional Economic Area: Lethbridge

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	3,285	2,810	6,095	885	260	230	70	85	7,625
Rural Areas	6,935	410	7,345	555	380	125	35	40	8,480
Regional Sum	10,220	3,220	13,440	1,440	640	355	105	125	16,105

Table A-10. Functional Economic Area: Medicine Hat

	Place of Work of Commuters								
						Out of Province			
Place of Residence of Commuters	Communities	Rural Areas	Regional Totals	Other AB Communities	Other AB Rural Areas	BC.	SK.	Other	Total Commuters
Communities	125	2,220	2,345	525	135	85	245	120	3,455
Rural Areas	3,040	280	3,320	255	105	-	65	10	3,755
Regional Sum	3,165	2,500	5,665	780	240	85	310	130	7,210

Table A-11: Alberta FEAs, Summary

	Totals	% of FEA Pop	% Total Pop
FEA 1, Peace River	54,860	2.10	2.03
FEA 2, Grand Prairie	71,575	2.73	2.65
FEA 3, Bonnyville	47,790	1.83	1.77
FEA 4, Hinton	31,860	1.22	1.18
FEA 5, Edmonton	1,015,780	38.80	37.67
FEA 6, Lloydminster	57,015	2.18	2.11
FEA 7, Red Deer	191,355	7.31	7.10
FEA 8, Calgary	919,415	35.12	34.09
FEA 9, Lethbridge	137,810	5.26	5.11
FEA 10, Medicine Hat	90,805	3.47	3.37
FEA Total	**2,618,265**	**100.00**	**97.09**
Other Population	78,560		2.91
Alberta Total	**2,696,825**		**100.00**

Table A-12: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 1, Peace River

Focal Points and Rural Areas	Female	Male	Sum Total
Town of Peace River	9,410	9,235	18,645
Town of Fairview	1,655	1,690	3,345
Fairview No. 136	945	880	1,825
Smoky River No. 130	2,690	2,545	5,235
Peace No. 135	1,170	980	2,150
Clear Hills No. 21	1,760	1,545	3,305
Opportunity No. 17	1,605	1,470	3,075
Big Lakes MD	3,115	2,985	6,100
East Peace No.131	1,400	1,290	2,690
Lesser Slave River No.124	1,430	1,300	2,730
Northern Lights No. 22	3,030	2,730	5,760
FEA Totals	28,210	26,650	54,860

Table A-13: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 2, Grande Prairie

Focal Points and Rural Areas	Female	Male	Sum Total
Town of Grande Prairie	16,795	16,355	33,150
Town of Grande Cache	4,615	4,015	8,630
Town of Spirit River	1,325	1,260	2,585
Grande Prairie County No. 1	9,015	8,370	17,385
Greenview No. 16	2,790	2,640	5,430
Saddle Hills No. 20	1,490	1,235	2,725
Birch Hills No. 19	880	790	1,670
FEA Totals	36,910	34,665	71,575

Table A-14: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 3, Bonnyville

Focal Points and Rural Areas	Female	Male	Sum Total
Town of Bonnyville	10,795	10,725	21,520
Bonnyville County	9,530	8,400	17,930
Lakeland County	290	270	560
St. Paul County No. 19	4,000	3,780	7,780
FEA Totals	24,615	23,175	47,790

Table A-15: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 4, Hinton

Focal Points and Rural Areas	Female	Male	Sum Total
Town of Hinton	8,885	8,510	17,395
Improvement District No. 12	2,245	2,120	4,365
Yellowhead No. 94	5,320	4,780	10,100
FEA Totals	16,450	15,410	31,860

Table A-16: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 5, Edmonton

Focal Points and Rural Areas	Female	Male	Sum Total
City of Edmonton	365,425	376,970	742,395
Town of Camrose	6,475	7,245	13,720
Town of Drayton Valley	2,940	2,945	5,885
Town of Mundare	655	640	1,295
Town of Barrhead	7,215	6,815	14,030
Town of Athabasca	3,365	3,780	7,145
Town of Wetaskiwin	5,220	5,730	10,950
Wetaskiwin County No. 10	6,580	6,090	12,670
Camrose County No. 22	5,145	4,855	10,000
Flagstaff County No. 29	4,840	4,715	9,555
Beaver County No. 9	4,670	4,625	9,295
Leduc County No. 25	6,475	5,985	12,460
Parkland County	12,940	11,960	24,900
Strathcona County	32,355	31,820	64,175
Sturgeon No. 90	8,350	7,580	15,930
Lamont County	2,985	2,815	5,800
Lac Ste. Anne County	6,890	6,355	13,245
Barrhead County No. 11	3,080	2,785	5,865
Woodlands No. 15	1,945	1,755	3,700
Westlock No. 92	3,905	3,450	7,355
Athabasca County No. 12	4,645	4,245	8,890
Thorhild County	1,825	1,585	3,410
Smoky Lake County	3,070	2,925	5,995
Brazeau No. 77	3,715	3,400	7,115
FEA Totals	504,710	511,070	1,015,780

Table A-17: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 6, Lloydminster

Focal Points and Rural Areas	Female	Male	Sum Total
City of Lloydminster (Part)	9,960	10,440	20,400
Town of Wainwright	3,440	3,565	7,005
Special Area No. 4	1,460	1,315	2,775
Provost No. 52	1,790	1,590	3,380
Wainwright No. 61	2,775	2,520	5,295
Vermilion River County No. 24	4,605	4,355	8,960
Minburn County	2,475	2,195	4,670
Two Hills County	2,355	2,175	4,530
FEA Totals	28,860	28,155	57,015

Table A-18: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 7, Red Deer

Focal Points and Rural Areas	Female	Male	Sum Total
City of Red Deer	39,865	41,550	81,415
Town of Olds	8,305	8,870	17,175
Town of Stettler	2,445	2,775	5,220
Town of Ponoka	3,870	4,380	8,250
Clearwater No. 99	5,930	5,420	11,350
Ponoka County No. 3	4,410	3,975	8,385
Lacombe County	7,220	6,835	14,055
Red Deer County No. 23	11,045	9,995	21,040
Stettler County No. 6	3,270	3,035	6,305
Paintearth County No. 18	2,325	2,250	4,575
Mountain View County No. 17	7,010	6,575	13,585
FEA Totals	95,695	95,660	191,355

Table A-19: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 8, Calgary

Focal Points and Rural Areas	Female	Male	Sum Total
City of Calgary	400,690	404,645	805,335
Town of Canmore	4,170	4,155	8,325
Town of High River	3,620	3,730	7,350
Town of Drumheller	4,870	4,725	9,595
Town of Strathmore	2,595	2,680	5,275
Bighorn No. 8	790	755	1,545
Improvement District No. 9	3,790	3,595	7,385
Improvement District No. 5	390	290	680
Foothills No. 31	9,185	8,805	17,990
Kneehill No. 48	3,860	3,795	7,655
Starland No. 47	1,410	1,400	2,810
Vulcan No. 2	3,235	3,215	6,450
Ranchland No. 66	3,250	3,235	6,485
Rocky View No. 44	12,005	11,305	23,310
Wheatland County No. 16	4,110	3,860	7,970
Badlands No. 7	645	610	1,255
FEA Totals	458,615	460,800	919,415

Table A-20: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 9, Lethbridge

Focal Points and Rural Areas	Female	Male	Sum Total
City of Lethbridge	39,080	36,945	76,025
Town of Fort MacLeod	3,385	3,085	6,470
Lethbridge County No. 26	6,400	6,825	13,225
Pincher Creek No. 9	1,615	1,825	3,440
Taber No. 14	3,560	3,990	7,550
Warner County	3,045	3,120	6,165
Willow Creek No. 26	3,720	3,880	7,600
Improvement District No. 4	115	165	280
FEA Totals	69,585	68,225	137,810

Table A-21: Alberta FEAs, Population by Rural Areas and Focal Points, by Gender, FEA 10, Medicine Hat

Focal Points and Rural Areas	Female	Male	Sum Total
City of Medicine Hat	24,895	25,990	50,885
Town of Hanna	6,740	6,365	13,105
Special Area No. 2	1,295	1,235	2,530
Special Area No. 3	1,700	1,525	3,225
Cypress No. 1	3,005	2,685	5,690
Newell County No. 4	4,695	4,385	9,080
Forty Mile County No. 8	2,955	2,790	5,745
Acadia No. 34	280	265	545
FEA Totals	45,565	45,240	90,805

Table A-22: Alberta FEAs, Population by Age Group and Gender, FEA 1, Peace River

Age Group	Female	Male	Sum Total
0 - 4	2,610	2,400	5,010
5 - 9	2,710	2,465	5,175
10 - 14	2,440	2,520	4,960
15 - 19	2,285	2,135	4,420
20 - 24	1,890	1,870	3,760
25 - 29	2,105	1,990	4,095
30 - 34	2,345	2,260	4,605
35 - 39	2,285	2,245	4,530
40 - 44	2,175	1,850	4,025
45 - 49	1,665	1,515	3,180
50 - 54	1,305	1,230	2,535
55 - 59	1,160	975	2,135
60 - 64	1,065	850	1,915
65 - 69	800	695	1,495
70 - 74	600	580	1,180
75 +	770	1,070	1,840
Total	28,210	26,650	54,860

Table A-23: Alberta FEAs, Population by Age Group and Gender, FEA 2, Grande Prairie

Age Group	Female	Male	Sum Total
0 - 4	2,965	2,780	5,745
5 - 9	3,145	2,940	6,085
10 - 14	3,230	3,120	6,350
15 - 19	2,950	2,825	5,775
20 - 24	2,915	2,480	5,395
25 - 29	2,805	2,650	5,455
30 - 34	3,410	3,295	6,705
35 - 39	3,470	3,280	6,750
40 - 44	3,005	2,770	5,775
45 - 49	2,370	2,100	4,470
50 - 54	1,650	1,580	3,230
55 - 59	1,405	1,230	2,635
60 - 64	1,140	995	2,135
65 - 69	910	825	1,735
70 - 74	700	660	1,360
75 +	840	1,135	1,975
Total	36,910	34,665	71,575

Table A-24: Alberta FEAs, Population by Age Group and Gender, FEA 3, Bonnyville

Age Group	Female	Male	Sum Total
0 - 4	2,105	2,000	4,105
5 - 9	2,380	2,170	4,550
10 - 14	2,325	2,065	4,390
15 - 19	1,900	1,705	3,605
20 - 24	1,470	1,305	2,775
25 - 29	1,645	1,720	3,365
30 - 34	2,450	2,350	4,800
35 - 39	2,310	2,120	4,430
40 - 44	1,755	1,555	3,310
45 - 49	1,270	1,315	2,585
50 - 54	1,080	1,070	2,150
55 - 59	965	840	1,805
60 - 64	885	730	1,615
65 - 69	710	645	1,355
70 - 74	540	570	1,110
75 +	825	1,015	1,840
Total	24,615	23,175	47,790

Table A-25: Alberta FEAs, Population by Age Group and Gender, FEA 4, Hinton

Age Group	Female	Male	Sum Total
0 - 4	1,205	1,185	2,390
5 - 9	1,305	1,260	2,565
10 - 14	1,360	1,335	2,695
15 - 19	1,310	1,160	2,470
20 - 24	1,170	1,175	2,345
25 - 29	1,200	1,155	2,355
30 - 34	1,480	1,460	2,940
35 - 39	1,670	1,555	3,225
40 - 44	1,470	1,280	2,750
45 - 49	1,110	965	2,075
50 - 54	825	660	1,485
55 - 59	650	565	1,215
60 - 64	580	475	1,055
65 - 69	485	400	885
70 - 74	295	280	575
75 +	335	500	835
Total	16,450	15,410	31,860

Table A-26: Alberta FEAs, Population by Age Group and Gender, FEA 5, Edmonton

Age Group	Female	Male	Sum Total
0 - 4	35,645	34,380	70,025
5 - 9	39,355	37,290	76,645
10 - 14	39,920	37,770	77,690
15 - 19	36,835	35,155	71,990
20 - 24	34,525	34,810	69,335
25 - 29	36,615	37,010	73,625
30 - 34	43,410	44,235	87,645
35 - 39	47,105	46,825	93,930
40 - 44	42,315	41,775	84,090
45 - 49	35,810	35,480	71,290
50 - 54	26,635	26,425	53,060
55 - 59	21,575	21,245	42,820
60 - 64	19,020	19,165	38,185
65 - 69	16,850	17,510	34,360
70 - 74	12,780	15,430	28,210
75 +	16,315	26,565	42,880
Total	504,710	511,070	1,015,780

Table A-27: Alberta FEAs, Population by Age Group and Gender, FEA 6, Lloydminster

Age Group	Female	Male	Sum Total
0 - 4	2,080	1,950	4,030
5 - 9	2,310	2,125	4,435
10 - 14	2,350	2,230	4,580
15 - 19	2,275	2,065	4,340
20 - 24	1,795	1,585	3,380
25 - 29	1,800	1,775	3,575
30 - 34	2,250	2,260	4,510
35 - 39	2,470	2,370	4,840
40 - 44	2,185	1,980	4,165
45 - 49	1,750	1,735	3,485
50 - 54	1,475	1,330	2,805
55 - 59	1,200	1,150	2,350
60 - 64	1,140	1,105	2,245
65 - 69	1,110	1,090	2,200
70 - 74	935	1,030	1,965
75 +	1,735	2,375	4,110
Total	28,860	28,155	57,015

Table A-28: Alberta FEAs, Population by Age Group and Gender, FEA 7, Red Deer

Age Group	Female	Male	Sum Total
0 - 4	6,995	6,800	13,795
5 - 9	7,985	7,485	15,470
10 - 14	8,105	7,745	15,850
15 - 19	7,365	6,995	14,360
20 - 24	6,185	5,895	12,080
25 - 29	5,900	6,045	11,945
30 - 34	7,630	7,985	15,615
35 - 39	8,950	8,675	17,625
40 - 44	7,840	7,615	15,455
45 - 49	6,285	6,040	12,325
50 - 54	4,720	4,735	9,455
55 - 59	4,060	3,930	7,990
60 - 64	3,750	3,590	7,340
65 - 69	3,380	3,365	6,745
70 - 74	2,630	3,160	5,790
75 +	3,915	5,600	9,515
Total	95,695	95,660	191,355

Table A-29: Alberta FEAs, Population by Age Group and Gender, FEA 8, Calgary

Age Group	Female	Male	Sum Total
0 - 4	32,660	31,050	63,710
5 - 9	35,060	33,580	68,640
10 - 14	34,125	32,485	66,610
15 - 19	30,610	28,840	59,450
20 - 24	32,565	31,920	64,485
25 - 29	36,790	36,365	73,155
30 - 34	43,070	43,535	86,605
35 - 39	47,185	46,645	93,830
40 - 44	41,800	40,360	82,160
45 - 49	33,820	32,715	66,535
50 - 54	23,245	22,560	45,805
55 - 59	17,305	17,605	34,910
60 - 64	15,285	15,795	31,080
65 - 69	13,315	14,420	27,735
70 - 74	9,605	12,370	21,975
75 +	12,175	20,555	32,730
Total	458,615	460,800	919,415

Table A-30: Alberta FEAs, Population by Age Group and Gender, FEA 9, Lethbridge

Age Group	Female	Male	Sum Total
0 - 4	4,890	5,230	10,120
5 - 9	5,230	5,620	10,850
10 - 14	5,445	5,965	11,410
15 - 19	5,410	5,515	10,925
20 - 24	4,815	4,985	9,800
25 - 29	4,305	4,285	8,590
30 - 34	4,930	4,965	9,895
35 - 39	5,545	5,355	10,900
40 - 44	5,080	5,050	10,130
45 - 49	4,400	4,280	8,680
50 - 54	3,380	3,340	6,720
55 - 59	2,860	2,865	5,725
60 - 64	2,760	2,675	5,435
65 - 69	2,725	2,590	5,315
70 - 74	2,615	2,045	4,660
75 +	5,195	3,460	8,655
Total	69,585	68,225	137,810

Table A-31: Alberta FEAs, Population by Age Group and Gender, FEA 10, Medicine Hat

Age Group	Female	Male	Sum Total
0 - 4	3,340	3,030	6,370
5 - 9	3,570	3,415	6,985
10 - 14	3,750	3,545	7,295
15 - 19	3,490	3,305	6,795
20 - 24	3,195	2,920	6,115
25 - 29	3,125	2,995	6,120
30 - 34	3,595	3,550	7,145
35 - 39	4,125	3,865	7,990
40 - 44	3,715	3,505	7,220
45 - 49	2,830	2,795	5,625
50 - 54	2,080	2,165	4,245
55 - 59	1,720	1,795	3,515
60 - 64	1,770	1,715	3,485
65 - 69	1,635	1,815	3,450
70 - 74	1,455	1,705	3,160
75 +	2,170	3,120	5,290
Total	45,565	45,240	90,805

CHAPTER SIX: CONCLUSIONS

The Labour Market Areas and FEAs across the Prairie provinces have several common characteristics, and although each province has some features which are unique, the pervasiveness of the general relationships dominate.

Labour Market Areas

Potential focal points in each province included all communities in the top three functional classifications in their central place systems. In Manitoba some PSCs were also included where there were no higher level centres in remote areas. In Alberta, some PSCs and a few FCCs were included for the same reason. For Saskatchewan, the 62 communities that were used as potential focal points in the 1981 and 1991 LMA studies were again used in order to maintain historical continuity. These 62 places were the centres in the top four functional categories at the time the first Saskatchewan LMA study was conducted. In 2001, these 62 included all of the communities in the top four functional categories (24 centres in 2001) plus about half of the communities in the present FCC classification.

Since the labour force resident in some rural geographies commutes to more than one community for employment, a factor analysis program was used to pair potential focal points that share commuters in a substantial manner. The greatest reduction from potential focal points to paired (conglomerate) focal points occurred in Alberta where the reduction was from 75 to 21. The number of potential focal point communities in the corridor that share overlapping tributary areas resulted in several clusters of communities aggregating into a small number of conglomerate focal points.

The least amount of pairing occurred in Saskatchewan where the settlement pattern consists of numerous small, isolated communities distributed across a thinly populated landscape. In this case, pairing reduced the number from 62 potential focal points to 29 conglomerate focal points.

Pairing in Manitoba reduced the original 27 communities to 10. The pattern around Winnipeg and in the Morden-Winkler area was similar to that in Alberta's corridor while in western Manitoba the pattern resembled that in Saskatchewan.

In each province, the LMA populations in areas where the focal point consisted of one or more lower level centres is universally small while that in areas dominated by PWR or SWR centres is large. In each province, there were large rural areas where commuting to a focal point was too low for attachment to a focal point.

Functional Economic Areas

Combining shopping patterns with journeys-to-work to create FEAs reduces the number of (economically small) spatial entities, increases the populations of most of the resulting spatial units and incorporates all of the previously unattached rural space.

In Alberta 10 FEAs emerge. All have focal points of CSC or higher except for Hinton and Bonnyville, which are PSCs. Also Saskatchewan's 11 FEAs, as well as Manitoba's six FEAs are formed around focal points of CSC or higher. The largest FEAs are still very large while the smallest are still small, but the range of sizes within FEAs is much less than that among LMAs. In Table 19 the populations of the Prairie region's five largest LMAs and FEAs are compared with those of the five smallest LMAs and FEAs.

As with other comparisons, Saskatchewan dominates the list of smallest places while Alberta dominates the list of the largest. Even so, each province has one or more entries in three of the four largest-and-smallest groups. Only Alberta is absent from the list of smallest LMAs.

Table 19: Populations of Largest and Smallest LMAs and FEAs in the Prairie Provinces

LMA	Population	FEA	Population
Edmonton	911,965	Edmonton	1,015,780
Calgary	879,160	Calgary	919,415
Winnipeg	787,711	Winnipeg	784,509
Saskatoon	237,020	Saskatoon	255,490
Regina	213,355	Regina	224,370
Redvers, SK	2,315	Kindersley-Rosetown, SK	21,071
Hudson Bay, SK	3,455	Humboldt, SK	25,475
Roblin-Russell, MB	4,385	Hinton, AB	31,860
Outlook, SK	5,565	Portage la Prairie, MB	34,066
Carnduff-Oxbow, SK	5,590	Steinbach, MB	34,881

In Table 20 the commuting patterns for the three provinces are compared. While there are some differences, the overall impression is of highly similar patterns. The percentage of the total labour force that commutes to work is between 18 percent in Manitoba and 20 percent in Alberta. Out-of-province commutes in column two differ somewhat but indicate that between 90 and 94 percent of the labour force in the prairies is employed in the province of residence.

Table 20: Commuting Patterns of the Prairie Provinces

Province	% LF commuting	% OOP	Within the Province					
			% Within FEA			% Other Province		
			Total	Urban	Rural	Total	Urban	Rural
Alberta	20.04	6.79	80.73	73.17	26.83	12.49	65.40	34.60
Saskatchewan	19.33	10.18	73.63	68.14	31.86	16.18	67.84	32.16
Manitoba	18.15	5.78	79.44	70.75	29.25	14.78	45.40	54.60

In each province, as well, a substantial majority of the commutes terminate in the FEA of residence. Alberta and Manitoba are very similar with 80 ±1 percent of their commutes originating and terminating in the same FEA. Even in Saskatchewan, however, where the percentage is the lowest among the three provinces, it is still nearly 74 percent. These figures provide the best measure of the cohesiveness of the FEA system. This is a direct measurement of part of the definition of an FEA which refers to labour resident with in the region being employed within it. With respect to the shopping component of the definition, the summary of spatial multipliers in Chapter Two provides indirect assurance that a similar percentage of consumption spending occurs within the FEA since each was constructed primarily around CSC or higher level focal points.

Columns four and five identify the percentage of the within-FEA commutes terminating in urban and rural locations. Again the pattern is very similar with only 2½ percentage points separating the highest and lowest provinces from the simple mean of commutes terminating in urban (and rural) places. The percentage of commutes originating in rural areas which terminate in urban centres is even higher at 94, 85, and 82 percent respectively for Alberta, Manitoba, and Saskatchewan (from Tables 6, 11, and 16). These figures indicate the importance of cities and

large towns in the economies of the Prairie provinces as well as the overwhelming dependence of rural commuters on jobs in urban centres.

The final three columns in Table 20 record the percentages of commuters who leave their FEA of residence for employment elsewhere within their home province. Again the pattern is similar among provinces. Approximately two percentage points separate Alberta and Saskatchewan from the simple three province mean of 14.48 percent. In Alberta and Saskatchewan approximately two-thirds of these commutes terminate in an urban centre although, in Manitoba, the figure falls below 50 percent due largely to the high percentage of these commuters leaving the FEA of Dauphin who find employment elsewhere in rural Manitoba.

The systems of Functional Economic Areas defined in this report represent the most cohesive, self-contained regionalization possible for the three Prairie provinces. At the centre of each is a city or a large rural community. These centres (focal points) provide jobs as well as trade and services, both public and private. The rural areas tributary to the centres provide labour and a market for a substantial portion of the centre's business outlets and public services. These regions provide a logical framework within which to plan for new initiatives, either public or private.

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