Abstract

In the past several years, pluriactivity has become quite widespread among moshav farming households, especially those located within Metropolitan Tel Aviv’s rural fringe. Agricultural income has been on the decline and other sources of income have appeared. This paper has a threefold aim: To identify major patterns of income sources among Moshav’s households; to explain the underlying causes for choosing pluriactivity as an income-producing strategy; and to explain the reasons for the specific choice of pluriactivity patterns adopted.

An analysis of the activities of moshavim located in the Sharon Region indicates that the further the moshav from the metropolitan area, the greater the role of agriculture in total family income. Within a pluriactivity strategy, the main additional sources of income are wage employment and small business activity, carried out either on or off the moshav. The main factors stimulating the increase in pluriactivity are the decline in agricultural income and the desire to take advantage of vocational training. This trend is supported by other factors, such as the availability of premises for alternative uses as well as the ease of operating a business from the home.

The divergence in pluriactivity patterns may indicate that the frequency of mixing agriculture with other income sources may be a temporary option adopted by households for which agriculture has been a mainstay. Those households may shift away from agriculture in the short or mid-term. We would argue that at present, for the majority of those no longer devoted solely to agriculture, pluriactivity is also aimed at helping to sustain agricultural activity. In such cases, farmers utilise the resources acquired from non-agricultural employment for investment in agriculture, including the upgrading of equipment and other assets.

1. Introduction

Transformations in the structure and appearance of rural settlements, patterns of land use, and employment among members of farming households have become intrinsic to the rural space throughout the Western world. Israel’s rural space has also been experiencing the corresponding rapid and meaningful socio-economic changes over the last decade, particularly in the moshav, one of the country’s unique types of agricultural settlements. In the moshav, one of the most significant changes has been the intensification of pluriactivity on the household level. The growth in the number of farming households relying solely on agricultural income has been reversed, with the search for additional sources of income becoming widespread. As cooperative production diminishes, and as individualism and free market orientations spread, moshav households are intensifying their participation in the wage labour market, renting farm premises to outside entrepreneurs, and engaging in on-farm industrial and service activities. Often, income from these sources exceeds income from agriculture. Within the context of Israel’s dynamic economy, the family’s labour resources—their availability, skill composition, and distribution by gender—are enabling households to base their incomes on various sources of employment.

The paper has a threefold aim: To identify major patterns of income sources among moshav households; to explain the underlying causes for choosing pluriactivity as an income producing-strategy; and to explain the reasons for the specific choice of the pluriactivity pattern adopted. The data, gathered among six moshav located in the Sharon Region of Israel, provide the empirical foundations for an attempt to characterise the phenomenon of pluriactivity within this region and to
comprehend the moshav’s household survival strategy within the current economic environment. The paper is divided into five parts. The first presents the theoretical framework of pluriactivity, including examples from various countries. The second part describes the moshav and the transitions it has undergone. The factors characterising the employment structure of the region studied are presented in the third part, while the fourth examines the causes driving employment structure transformations. In the concluding part, the main findings are discussed and an attempt is made to delineate the long-term implications of economic change for the individual rural household as well as for Israel’s rural space.

2. Pluriactivity: its background and selected examples

2.1. Background

The analysis of changes in the rural areas of Western economies emphasises, among other processes, the phenomenon of pluriactivity; that of household participation, simultaneously, in diversified, non-agricultural employment whether on or off the family farm. According to the literature (Hart, 1984; Healy and Ilbery, 1985; Gasson, 1987, 1988a; Fuller, 1990; Marsden, 1990; Grossman, 1993; Bateman and Ray, 1994) the main causes of these transformations are:

1. Increased efficiency of the agricultural sector and productivity per unit of input, resulting in reduced demand for labour coupled with burgeoning food surpluses, events that have triggered a policy encouraging exit from the agricultural sector.
2. Deteriorated terms of trade for the agricultural sector, expressed in the rising costs of inputs and the relative fall in the prices of outputs, a process culminating in declining net income from agriculture.
3. Changes in the demographic and occupational profiles of agricultural settlements in response to the movement of urban populations into rural communities.
4. Heightened receptivity among farming households to alternative sources of income, a result of the acquisition of vocational training and advanced education.
5. Regulatory policies that circumscribe the flexibility required by farming households to respond to changing economic conditions.
6. Transportation infrastructure improvements that have enhanced the relative advantages offered by rural locations as sites for non-agricultural activities and facilitated the access of rural residents to urban-based employment.

These factors have culminated in a process of restructuring similar to that undergone by other economic sectors. Restructuring is expressed, among other things, by the entry of farming household members into non-agricultural areas of activity whether on or off the farm. The ensuing effects include the industrialisation of the rural community and its surroundings, the penetration of commercial and service sector businesses into rural villages, and the rise in commuting to urban centres of employment (Gasson, 1988a, b; Ilbery, 1991; Grossman, 1993; Sofer and Ne’eman, 1998; Eikeland and Lie, 1999).

The concept pluriactivity (which might be more properly termed pluri-income) refers to the farming household conceived as an economic unit in which all household members contribute to its income through employment in agriculture and/or non-agricultural activities, whether on or off the farm. This concept expresses the efforts made by farming households throughout the world to survive as economic entities (Marsden et al., 1986; Ilbery, 1991; Davis et al., 1997). Its application permits a more accurate analysis of the farming household’s strategy for economic survival (Evans and Ilbery, 1993), considering that the household is, at present, the only feasible unit available for gathering income and employment statistics (Hill, 1999). Its scope is rising in direct proportion to the relative decline of agricultural income, and it is increasingly taken as a strategic response to the constraints imposed by local market conditions.

By varying their sources of income, farming households often bring about the proletarianisation of their own labour. However, contrary to the classic process that severs the link between labour and other factors of production, proletarianisation in the present circumstances supports the socio-economic differentiation of the farming household. In essence, the continued existence of the farming household is dependent upon this differentiation, viewed as the household’s ability to reallocate its internal labour force and to expand its participation in the labour market (Marsden, 1990; Marsden et al., 1996).

2.2. The spread of pluriactivity

The scope of pluriactivity in Europe is significant: More than 60% of the family farms operating throughout the European Union are involved in pluriactivity. This means that in the majority of Europe’s farming households, at least one adult earns income from non-agricultural employment either on or off the farm (Gasson and Winter, 1992). In some areas, this trend is progressing gradually, whereas in others it is accelerating rapidly. In the Grampian region of Scotland, the phenomenon increased by almost 50% between 1980 and 1991 (Edmond et al., 1993).
Alternatively, in Norway, it has spread slowly (Eikeland and Lie, 1999), probably because the majority of farming households have combined farm and non-farm income much earlier (Jervell, 1999). Pluriactivity has reached significant levels in Wales, where only 7% of the households surveyed earn their livelihood exclusively from agriculture (Bateman and Ray, 1994), and in New Zealand, where almost 60% of the farming households, especially those occupied in raising livestock or growing apples, supplement their incomes from non-agricultural sources (Le Heron et al., 1994). Pluriactivity has characterised rural households for some time in Malta (Short and Tricker, 1994), is accelerating within the urban fringes of Japan (van der Meer, 1990), and is quite prevalent in Rumania, especially at present, as the Rumanian farm undergoes intensive structural transformation (Sofer and Bordanc, 1998).

A comprehensive study conducted in Western Europe has disclosed two major variables that characterise the economic activity of those farming households that resort to pluriactivity: the degree of dependence on commercial non-agricultural as opposed to agricultural activities, and the relative strength of regional non-agricultural labour markets (Fuller, 1990). This pattern has been recently re-emphasised by Hill (1999). Findings indicate the presence of spatial and seasonal disparities in the presence of pluriactivity throughout Western Europe, as clearly shown for France (Campagne et al., 1990). In peripheral regions characterised by small-farm production, one finds a significant degree of pluriactivity accompanied by low levels of income and little labour mobility. In these regions, pluriactivity represents a strategy for the very survival and continued ownership of the family farm. One outstanding feature of this process is the farming household’s entry into the tourist industry, particularly in sparsely populated areas. By comparison, for more than a decade, the dominate feature of London’s rural fringe, particularly in the south, has been the penetration of non-agriculture-related small businesses run from abandoned farm buildings. Some of these businesses originated outside the rural settlement but later relocated to these sites, although a large proportion were founded within the villages themselves (Short, 1995). In addition, a main feature of the fringe of metropolitan areas is off-farm wage labour as an important source of income, and the rising share of women occupied in such work (Jervell, 1999). In these areas, pluriactivity represents a stage in the sector’s capitalist development: Farming is exhibiting clear tendencies toward capital accumulation as well as growing disengagement from agriculture as its economic base (Marsden et al., 1986; Campagne et al., 1990).

3. The Moshav in Israel

3.1. The essence of the moshav

The moshav is a planned smallholders’ cooperative settlement (about 410 of which are spread throughout the country) that emerged in the 1920s. Generally, numbering about 60–100 families, farmers in these settlements work their individual parcels of land and draw income from their farms’ yields. The amount of land allocated differs for each moshav, according to region and type of agricultural branch dominant, although it is equitable within each moshav. Farmers usually own three different plots. Plot A, where the house and farm buildings are located and, if large enough, can allow for very intensive agricultural production to take place. Plot B, which is the main farming unit and may be divided into two or more sections. Plot C, which is a communally cultivated plot, the profits from which are equally divided among moshav’s households.

The original principles of the moshav and its cooperative character should be emphasised (Rokach, 1978; Schwartz, 1999):

1. State-owned land allocated to settlement and farmers: To encourage farming as well as to tie the settlers to the land and to their community, land was leased for a 49 years period, at paltry sum, with an automatic option for renewal or transfer to heirs.

2. Self-labour: The farm was planned to sustain itself solely from agriculture. Originally, settlers benefited from subsidised investments in the form of financial support for the construction of housing and the purchase of production infrastructure. The means of production at the disposal of the settler were allocated such that each individual household would be able to carry out most of the farm work without recourse to hired labour.

3. Equal income opportunity: The means of production allocated to the farmer were considered to be sufficient to provide what was estimated as an average urban household income, thought suitable to support the family.

4. Cooperative organisation and mutual assistance: A cooperative association was formed to deal with the joint purchasing and marketing activities. Furthermore, mutual financial commitments, initially made by moshav members for the purpose of providing crisis relief was later used as collateral

Another form of agricultural settlement found in Israel, the moshav shittufi, is a collective smallholders’ settlement where production is carried out communally but where family life is self-contained. About 44 such settlements operate at present. This form of settlement is not discussed in this paper.
by individual households to underwrite their own economic activities. In addition, mutual assistance was given to the farmer by other moshav members who would help work his land when he was unable to do so.

3.2. Transformations in the moshav

For a number of years, the moshav has been undergoing a series of socio-economic transformations in response to the declining role of agriculture within Israel’s economy, the reduction of state support to agriculture, and the attrition of the ideological appeal of the “rural settlements system”. The changes have taken the form of decoopetivisation, modified income and occupational structures, suburbanisation, loss of municipal autonomy (Schwartz, 1999), and altered forms of land cultivation and land holding.

The reduction in agricultural employment, the entry of urban populations into rural communities by purchase of farm holdings without their entry into farming activities, and the penetration of non-agricultural activities into the moshav have transpired relatively quickly. For several years, rural areas in Israel have witnessed a steady decline in the proportion of the work force employed in agriculture, from 15% in 1960 to about 2.9% in 1997 (Ministry of Agriculture, 1999). Like other industrialised Western states, Israel’s agricultural sector has been influenced by two major factors. Advances in agrotechnology have contributed to reduction in labour requirements (Shor-esh, 1989), and rising productivity per unit of input has induced a spiralling growth in supply, far exceeding the leisurely growth in demand for agricultural products. Deteriorating terms of trade have been expressed in decreasing real prices of agricultural output and significantly diminishing profitability for the agricultural sector at large and for the individual farming households in particular.

Decoopetivisation has replaced cooperativisation, which was recognised as an obstacle to the spirit of individual entrepreneurship. This trend was expressed in the flight of moshav members from communal marketing and from exclusive dependence on the “moshav association” as the source of credit (Schwartz, 1999), even redistribution of the communally owned land, accomplished by giving to household self-cultivation rights to plot C has appeared. The question of mutual guarantees, which has forced moshav members to pay the debts of other members, has been abolished in almost all moshavim. In many others all cooperation between members has ceased, with the settlement now functioning as a village of purely individual smallholders.

Recently, the changing conditions confronted by the farming household have encouraged attempts to increase the scale of operations, by increasing land resources and labour inputs. In the past, these attempts were blocked by the moshav cooperative principles. According to the regulations, moshav members could not enlarge their holdings through purchase of land from other farms, a practice found to be an obstacle to upgrading agricultural activities and income. Land inputs have now been enlarged, which has allowed some farmers to cultivate large plots of land by subleasing parcels (plot B, usually for modest sums) from neighbours who prefer to limit the land they cultivate or to discontinue farming altogether. The latter phenomenon, which is generally accompanied by the transfer of production and water quotas to the sublessee, permits more efficient utilisation of machinery.

The use of self-labour has gradually been replaced by wage labour; as of the early 1990s, cheap foreign labour that has assisted in decreasing production costs and released household members to engage in non-agricultural occupations. The increase in capital resources was accomplished by investment in advanced technology, especially labour-saving technology, depending on the branch and its characteristics. The choice of strategy has been subject to the effects of variables such as attributes of the agricultural branch, the size of the individual farm and its domestic labour force, the non-agricultural skills of the household’s members, the farmer’s interest in continuing agricultural production, as well as the settlement’s location and socio-economic foundations.

Of late, the same process has stimulated, to differing degrees of intensity, the penetration of non-agricultural activities, usually on plot A (Grossman, 1993; Sherman and Keidar, 1993; Ilberg, 1994; Sofer and Ne’eman, 1998). Against this background, a number of trends have evolved in the rural space, since the early 1990s. At the macro level, increased demand for residential and industrial land, and a change in government policies towards the protection of farming land in the wake of a significant rise in land values, have facilitated and accelerated the transfer of agricultural land resources to other uses. At the farm level, land (especially plot B) has been set aside for unlimited periods, an outcome of individual decisions. Both trends have intensified negative environmental impacts with respect to land, water and air resources, and the general quality of rural life (Grossman, 1993; Ilberg, 1994; Sofer and Gal, 1996; Gal, 1998).

As elsewhere, Israel’s moshavim have been beset by the effects of urban sprawl, a process intensified following the entry of urban population having non-agricultural occupations and limited interest in farming (Applebaum, 1986). Their entry, usually through the purchase of farm holdings, has had a considerable impact on rural employment patterns, due to the
fact that they derive the bulk of their income from non-agricultural sources, mainly white-collar jobs or urban-based businesses, located outside the moshav. Improvements in transportation, which have encouraged commuting from the moshav to urban employment centres, have facilitated the shift in residence from the town to the countryside on the one hand, and the adoption of urban employment patterns by the moshav household on the other (Grossman, 1993). At the same time, as a result of accelerating internal pressures, the moshavim have intensified demands for revision of the regulations permitting only immediate heirs—rather than all members of the younger generation—to construct housing on the family plot. The official institutional response has been to relax the strictures and to permit extension of the moshav beyond its original boundaries (Ministry of Agriculture and the Jewish Agency, 1987; Applebaum and Keidar, 1992). In consequence, a residential revolution has been initiated, with a growing number of moshavim welcoming dozens of households that regard the moshav as a commuter’s dormitory suburb. This population is not, however, the subject of the present study.

In such circumstances, for those farmers who chose not to intensify their agricultural operations, the major income-augmenting mechanism available to them was employment, whether full or part time, off the family farm and/or outside the moshav itself (Haruvi, 1989; Kimhi, 1994). This could also be done by dividing the household’s labour resources among several activities, with some family members continuing to operate the farm while others opened a business on the property or worked off the moshav. The degree to which this strategy was adopted appears to be dependent upon the economic opportunities available within the vicinity of the moshav. For example, the magnitude of non-agricultural business as a proportion of total household activities is relatively higher in the eastern fringe of Metropolitan Tel Aviv (Sofer and Ne’eman, 1998). This region is considered highly attractive as a location for non-agricultural businesses, particularly manufacturing and warehousing linked to the metropolitan market.

Beyond the factors noted, a number of additional, fundamental forces have been motivating moshav members to turn to outside employment for several years (Applebaum and Margulies, 1985). Among these we can list, the weakening identification with farming as a preferred way of life, particularly among new immigrant households who lack any agricultural traditions or empathy for such a lifestyle as early as the 1950s. More recently, the location of the moshavim that may lie in regions marked by meagre land resources and few employment alternatives, even within the agricultural sector, has become important.

### 4. Pluriactivity and pluri-income in the moshav

#### 4.1. Methodology

At the outset of this paper, it was hypothesised that pluriactivity and its patterns are influenced by the decline in agricultural income, the composition of the household and its members occupational training, access to wage labour markets, the duration of property ownership, the total acreage cultivated, and the moshav’s distance from the metropolitan area. To test the influence of these variables, Lev HaSharon and Emek Hefer, two regional councils located in the Sharon Region, which lies at the northern fringes of Metropolitan Tel Aviv (Fig. 1), were chosen. Both also come under the influence of the city of Netanya (Sofer, 1982). The moshavim surveyed in the present study (the data were gathered in 1996) are located within the boundaries of these two regional councils, three in each council (Fig. 1). In order to obtain a representative sample for each council (Emek Hefer is situated further north), the choice was made according to the moshav’s distance from Netanya as well as the year it was founded. The sample therefore includes veteran moshavim, established prior to 1948, the year the State of Israel was established, as well as younger moshavim, founded subsequently. Within the six moshavim surveyed, about 40% of the households that own agricultural land were interviewed. The households surveyed were divided into three categories: (1) households whose livelihoods are based entirely on agriculture; (2) households combining agriculture with other income-producing activities; and (3) households occupied either in exclusively non-agricultural activities or for whom agriculture represents a marginal source of income.

#### 4.2. General characteristics

In the Sharon Region, citrus orchards cover a considerable portion of the cultivated land. For the majority of moshavim, the land cooperatively farmed (Plot C) is devoted to citrus. In addition, citrus groves occupy part of the individually cultivated areas (Plot B) in a number of farms. Among Emek Hefer’s moshavim, Plot B often contains greenhouses (primarily for flowers) and fruit trees, whereas among Lev HaSharon’s moshavim, Plot B may include a wider range of crops, including field crops such as wheat and potatoes, as well as orchards. Plot A in both subregions contains hen batteries, dairies, and flower nurseries whenever owners have turned to this branch.

Table 1 presents data on some major characteristics of agricultural activity on the regional level. The land in each moshav is divided equally among the households, although variations do appear between the moshavim. Among the more veteran moshavim, established prior to
1948, properties are a bit larger than among the moshavim established after 1948. But the more significant differences between the moshavim rest in how they exploit the land. In the majority of moshavim, more than 50% of the households cultivate their land directly although a significant percentage of farmers (about 30% in the Lev HaSharon region and about 40% in the Emek Hefer region) sub-lease their property to their moshav neighbours. Accordingly, several farmers work especially large parcels of land, thereby exploiting scale economies and using their equipment more efficiently. As a result, an inter-regional comparison of the data on the amount of land cultivated and the level of wage labour employed underscores the greater tendency to participate in agriculture among Emek Hefer versus Lev HaSharon moshavim. It is interesting to note that about half of the moshav households (a larger number in Emek Hefer than in Lev HaSharon) employ wage labourers, the majority of whom are wage earners from foreign countries. As elsewhere, the number of wage labourers varies by season and sector.

4.3. The characteristics of the moshav household’s income structure

The sample population consisted of agricultural property owners whose income from the time the moshav was founded and for considerable periods thereafter was based, in the main, on a single source—agriculture. The data collected shows that the current situation is quite different, and underscores the fact that about half of all moshav families enjoy income from two sources, usually with each household head earning income from a different source. About 15% of the households have three or more sources of income. It should be emphasised that a situation may arise in which a household enjoys four sources of income.
although only one source provides the bulk of its earnings.

Table 2 presents the sources of income by frequency and by region. It is important to note that the individual farmers were asked to relate to the general distribution of the sources of income; however, this distribution may change yearly, especially if agriculture is the main source of income. It should also be made clear that fluctuations in the income earned from agriculture represent the main factor influencing the role of other sources of income within total household annual income. Table 2 thus presents two types of data: (a) the percentage of households enjoying any earnings from each source of income within their total annual income; and (b) the percentage of households in which earnings from any particular source contributes to at least 50% of total annual income. The data indicate that agriculture continues to be the most frequently enjoyed source of income within the regions surveyed, and that it contributes to the annual income of more than 80% of the households surveyed, although only about 36% of the households derive more than 50% of their income from this source. The second important source is wage labour, practised almost exclusively outside the moshav. This source contributes to the income of more than two-thirds of all the households, and is the major—but not exclusive—source of income for over one-fourth of the households. An inter-regional comparison of the data highlights the fact that relatively speaking, agriculture remains the most important source of income in Emek Hefer whereas in Lev HaSharon, non-agricultural employment plays a similar role as a source of income. The latter may include ownership of a business, whether on the individual’s grounds or elsewhere on the moshav.

Table 3 presents average annual household income, by each source, for the whole region. These data reinforce the findings, where agriculture and wage labour together represent about 73% of the total annual income earned by the households surveyed. Further examination of the data reveals that households for whom the major sources of income is one of the following four, agriculture, wage labour, on- and off-farm business, this particular source provides almost 50% of total annual income.

The degree of importance of agriculture as a source of income is illustrated in Fig. 2, which displays the distribution of the three main sources of income for the total number of sampled households. They are organised in descending order of importance starting with those fully engaged in agriculture. This display reinforces the identification of three types of farm owners. The figure indicates that for about 12% of moshav households, income from agriculture represents close to 100% of total annual income. For about 20% of the households, agriculture represents between 61% and 90% of total annual income. All those households that derive more than 60% of their income from agriculture can be categorised as “farming” households. The others

<table>
<thead>
<tr>
<th>Source of income</th>
<th>Emeq Hefer</th>
<th>Lev Hasharon</th>
<th>Total households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Share of HH* enjoying an income source</td>
<td>Share of HH for whom source is over 50% of income</td>
<td>Share of HH enjoying an income source</td>
</tr>
<tr>
<td>Agriculture</td>
<td>82.4</td>
<td>40.7</td>
<td>77.7</td>
</tr>
<tr>
<td>Wage labour or salary employment</td>
<td>63.7</td>
<td>26.4</td>
<td>78.8</td>
</tr>
<tr>
<td>Leasing of land</td>
<td>29.7</td>
<td>1.1</td>
<td>27.1</td>
</tr>
<tr>
<td>Renting of premises</td>
<td>19.8</td>
<td>0.0</td>
<td>5.9</td>
</tr>
<tr>
<td>Off-farm business</td>
<td>17.6</td>
<td>4.4</td>
<td>16.5</td>
</tr>
<tr>
<td>On-farm business</td>
<td>7.7</td>
<td>2.2</td>
<td>25.9</td>
</tr>
<tr>
<td>Other</td>
<td>14.3</td>
<td>2.2</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

*HH = households.

Table 3
Distribution of average annual household income by source (in percentages)

<table>
<thead>
<tr>
<th>Source of income</th>
<th>Average</th>
<th>Average for those enjoying this source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>38.8</td>
<td>48.4</td>
</tr>
<tr>
<td>Wage or salary employment</td>
<td>33.8</td>
<td>47.5</td>
</tr>
<tr>
<td>On-farm business</td>
<td>8.6</td>
<td>52.4</td>
</tr>
<tr>
<td>Off-farm business</td>
<td>7.9</td>
<td>46.2</td>
</tr>
<tr>
<td>Renting of premises</td>
<td>2.6</td>
<td>20.2</td>
</tr>
<tr>
<td>Leasing of land</td>
<td>3.5</td>
<td>12.3</td>
</tr>
<tr>
<td>Other</td>
<td>4.3</td>
<td>39.7</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>
belong to either the “mixed” (for whom agriculture represents between 11% and 60% of their total income) or the “non-farming” categories (for whom agriculture represents up to 10% of their total income). The latter contains some households who depend solely on wage employment or non-agricultural business for their income.

As shown by Fig. 2, the majority of cases, the second-most important source of income for “farming” households, is wage employment. The relative contribution of other sources of income is marginal. We would argue that for these households, the time available for managing a business on the farm is highly limited. For “mixed” households in which agriculture remains the primary source of income, the second-most important source of income is also wage labour employment, which contributes 40%, on average, of total annual income. It is quite probable that a significant proportion of these households is in a state of transition, away from dependence on agriculture as the main source of income. By comparison, the most significant income source among “non-agricultural” households is wage labour employment (representing about 50%, on average, of total annual income for the households in this category), immediately followed by some form of business operated on or off the farm.

An analysis of the data gathered reveals that several factors may influence the scope of the proportion of income earned from agriculture: the length of property ownership, the total acreage cultivated, and the division of labour between the two heads of the household. There is a positive relationship between length of ownership and income derived from agriculture. Agriculture represents a significant source of income (reaching about 60% of total income) among veteran moshav households for which two subgroups can be identified. The first contains households owning their property for 20–30 years. Part of this group is composed of descendants of the original owners, individuals who inherited the land in the 1970s and who are continuing to work on it. The second subgroup is composed of the moshav’s most senior households, whose members settled on the moshav with its establishment more than 50 years ago. For the remaining households, the average contribution of income from agriculture represents less than 50% of annual income. Among the latter, the dominant category consists of households who have owned moshav farm for a relatively short time, usually less than 10 years, and for whom income from agriculture represents a very small contribution to total income, averaging only 16%. Many of these households have chosen to live on a moshav in order to improve their quality of life while continuing to earn their livelihoods from employment in non-agricultural occupations off the moshav.

We also anticipated that a close positive relationship would be found between the total acreage cultivated by the household and the proportion of income earned from agriculture. The data confirm this direct relationship: The larger the land area worked, the greater the relative importance of income from agriculture for the household’s livelihood. Accordingly, we predicted that the amount of cultivated land available to household, and the income earned from that land, would reflect the household’s interest in pursuing agriculture. The correlation between the amount of land cultivated and the income earned from agriculture persists up to the level at which income from agriculture represents 70–80% of total income. At this level, we find a significant number of cases in which farmers work their neighbours’ land in addition to their own. Nevertheless, an alternative scenario was likewise revealed, one in which highly intensive farming (e.g., flower nurseries) represents the primary or sole income-providing factor for the household. In these instances, agricultural activity does not require large land tracts; hence, not all the property available to the household is cultivated.

With respect to the third variable, an analysis of the allocation of income-earning responsibility between the two heads of the household, the husband and wife, reveals that there are no significant differences between Emek Hefer and Lev HaSharon. In general, husbands in both regions usually takes jobs based on a wider range of sources of income than do wives. Commonly, the husband earns the household’s primary income, while the wife provides secondary household income (Table 4). This hold for all type of income other than income earned from wage labour. This trend is especially strong when agriculture represents the primary or secondary source of income (73% and 83%, respectively). We should note here that agriculture exhibits a seasonal dimension in its use of labour; therefore, the wife may join her husband in the fields.

Fig. 2. Distribution of the main sources of moshav household income.
During the busy season, a period when labour shortages may arise.

Although the decision to take an outside job to minimise economic risks may be made by both spouses, the woman’s contribution to household income is felt mainly in her earnings from wage labour employment, whether that source of income is of primary or secondary importance (Table 4). Wage employment provides a steady, stable stream of income. We can guardedly state that the wife's contribution enables the husband, and thus the household, to continue to participate in agriculture, an occupation entailing high levels of risk as well as fluctuating levels of income. This observation leads us to tentatively suggest that without the wife's income contribution, the number of households occupied in agriculture would fall below present levels. Although it is still too early to state this hypothesis with any degree of confidence, it should be considered.

5. The reasons for transformations in the employment structure on the moshav

5.1. The reasons for adopting pluriactivity

A number of reasons have been identified for why moshav households adopt pluriactivity. It should be emphasised that we deal here only with households that have shifted away from full-time occupation in agriculture. Urban households whose members have non-agricultural occupations but that have chosen to settle on a moshav are excluded from the discussion. The data presented in Table 5 summarise the responses to a series of questions requesting household members to rank order their reasons for choosing pluriactivity. The respondents were offered 10 possible reasons, and were asked to score at least one of them on a scale of 6 to 1, in declining order of importance.

The data stress that the fundamental reason for turning to pluriactivity is declining income from agriculture. Even if this reason varies in its perceived importance at different points in time and with respect to different agricultural branches (some branches are more profitable than others) and individual behaviour (some households respond more quickly than others), pluriactivity certainly appears to be an economically rational strategy. In cases where one or more household members has acquired some type of vocational training, respondents also attach considerable importance to the desire to take advantage of their non-agricultural vocational training by seeking employment. The mere availability of alternative sources of labour (wage labourers, family members, and the younger generation) is a relatively unimportant factor in this decision. Scrutiny of the frequencies of the two highest ranked answers, “very important” (value of 6) and “important” (value of 5), as assigned to each of the reasons offered, confirms these conclusions. In addition, the disparities in the importance of each reason between the two regions is very small, with one exception: An outside entrepreneur’s offer to rent a moshav’s premises, generally ranked relatively low, is twice as important in Lev HaSharon than it is in Emek Hefer.

5.2. Income from agriculture and the establishment of businesses on the farm

The moshav households surveyed in the present study operate dozens of non-agricultural businesses on their farms, usually on plot A. Although this phenomenon is not entirely new, it would be interesting to examine if shifts in the level of income earned from agriculture have influenced decisions to establish a business on a farm’s premises. Among the businesses operating off the farm...
that contribute to the households’ income, some were established by farmers and some were established before settling on the farm. These businesses are ignored here partly because of the difficulties impeding acquisition of satisfactory information. Given that no data on the level and percentage of income earned from agriculture prior to opening a business are available, we must limit ourselves to examining current data.

Fig. 3 presents the reasons for establishing a business on the farm expressed in the frequency of the rankings “very important” or “important” assigned by the three types of households: that is, the farming household (income from agriculture makes 61% and above of total income), the mixed household (11–60%), and the non-farming household (10% and less). The figure clearly indicates that households for which agriculture is not the primary source of income consider the various reasons for their decision to open a business on the farm to be more important than do those farming households for which agriculture is the primary source of income. The most frequently given reason for opening a business on the farm is the decline in income from agriculture. This response was given almost 10 times more often by mixed and non-farming households than by farming households. Notably, taking advantage of non-agricultural vocational training, unwillingness to continue working in agriculture, and the availability of unutilised assets were ranked as very important or important comparatively more frequently by non-farming households. Similar to the previous set of responses, little importance was assigned to the availability of labour within the household or to offers made by outside entrepreneurs. We should admit, though, that two variables not considered in the present research, personal characteristics and preferences, might also have some influence on those decisions.

Table 6 presents the average rankings assigned by property owners from Lev HaSharon and Emek Hefer who have established such businesses, to the specific reasons for locating a business on their farm. The levels of importance range from values of 6 or very important, to 1 or unimportant. The respondents were offered a list of eight possible reasons, and asked to select and score at least one. The table indicates that there is no single outstanding reason for locating a business on the farm premises. The availability of factors of production (land, empty farm buildings, and infrastructure), as well as comfort, expressed in the proximity to the home, received the highest rankings. The expansion needs of businesses formerly located off the farm were ranked relatively low. The difference between the two regional councils was found in the greater importance given to low taxes and the absence of institutional control (regulation) in the Lev HaSharon versus Emek Hefer. With respect to these responses, we should remember that a larger number of businesses have been established in the Lev HaSharon region. Our initial conclusions indicate that farmers from Lev HaSharon moshavim may be more aware of the economic potential of businesses located on their farms and thus may be more conscious of the factors, including future changes in land use, that might influence such a decision.
have been possible due to the fact that moshav farmers
strength of the phenomenon is felt. All these changes
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institutional controls. With increasing distance from the
bear by outside entrepreneurs, low taxes, and limited
factors as well, particularly the pressures brought to
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generally the outcome of initiatives taken by local
into the moshav is a relatively recent phenomenon,
Although the penetration of non-agricultural business
change in the type and extent of farm activities pursued.
However, for farming households, wage labour is the
secondary source of income, whereas for non-farming
households it is the main source. The non-agricultural
businesses owned and operated by the households
surveyed in this study are found more frequently among
Lev HaSharon moshavim than among Emek Hefer
moshavim. As may be expected, the frequency of
businesses operated on moshav premises is three times
greater among non-farming than among farming
households.
Under worsening terms of trade, the tendency to
continue farming is steadily weakening. Non-agricul-
tal vocational training is being obtained and the desire to
realise the acquired skills is substantially increasing the
range of potential sources of income. The findings
indicate that the unwillingness to farm in such a
situation, combined with access to other economic
opportunities, especially wage employment and starting
a business either on or off the farm, encourage the
change in the type and extent of farm activities pursued.
Although the penetration of non-agricultural business
into the moshav is a relatively recent phenomenon,
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metropolitan area, going north, and even within the
region represented in this study, a relative decline in the
strength of the phenomenon is felt. All these changes
have been possible due to the fact that moshav farmers
adjusted their farm and the principles of operation of
their cooperative settlement to the changing conditions.
One issue raised by the research and requiring more
intensive study is the relationship between the structure
of income and participation in agriculture. The house-
hold division of labour, characterised by the husband
working the farm while the wife and members of the
younger generation work off the premises, guarantees a
steady livelihood. This arrangement permits owners to
maintain farming activities despite agriculture’s decreas-
ing contribution to total household income. We can
reasonably assume that such a description applies most
accurately to “mixed” households. Stated cautiously, in
this type of household, the wife, who is not “married” to
farming to the same degree as before, plays an
important role in securing the income that permits the
continuation of agricultural activity on the farm. Stated
differently, the persistence of agriculture, as a mode of
employment may be dependent on the household’s non-
agricultural sources of income, mainly employment in
wage labour, which in a significant number of cases
results from the wife’s entry into the labour market.
Thus, the wife’s disengagement from farm work
engenders a steady flow of income that guarantees the
household’s basic livelihood and permits the husband to
continue taking risks by operating the farm at a greater
or lesser level of activity.
These conclusions raise the question of how the Israeli
moshav is different from agricultural settlements in
other Western countries. At first glance, it appears that
the moshav is experiencing the same transformations
witnessed throughout Europe, although the rate and
manner in which they are transpiring is unique to
Israel’s rural space. In Europe, the second-most
important source of income for farming households is
off-farm wage employment or social receipts (Hill,
1999), with a not insignificant amount of pluriactivity
grounded toward tourism as well as recreational and leisure
time activities; off-farm entrepreneurship is generally
unimportant. In the moshavim examined in this study,
tourism is absent (rural tourism is prevalent mainly in
Israel’s north) and social receipts are negligible. Israel’s
rural population then diversifies in its employment
activities along a number of routes, with wage labour
in urban centres and operating a business on and off the
moshav representing the favoured alternatives.
In its current form, pluriactivity on the moshav is
perceived as a strategy that permits the farming house-
hold to persist its operations in the agricultural sector. It
may well be that a number of households, especially
those participating in agriculture to a limited degree, will
adopt pluriactivity for a short period, to eventually
cease doing so. This situation would not necessarily
involve the demise of family farming in Israel but it can
bring about a strong decline in the number of farms, a
reduction in the land farmed, and even the loss of what

### 6. Summary and conclusions

Pluriactivity represents the income-earning pattern
most prevalent among farm-owning moshav households
in Israel’s Sharon region. Although agriculture’s im-
portance has declined, it has not disappeared as a major
source of income. Nevertheless, other sources of income,
especially income from wage labour earned off the
moshav, are equal and growing in importance. Non-
agricultural income sources are identical for farming as
well as for mixed and non-farming households. How-
ever, for farming households, wage labour is the
secondary source of income, whereas for non-farming
households it is the main source. The non-agricultural
businesses owned and operated by the households
surveyed in this study are found more frequently among
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businesses operated on moshav premises is three times
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<table>
<thead>
<tr>
<th>Table 6</th>
<th>The relative importance of the reasons for locating a business on farm premises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason</td>
<td>Degree of importance</td>
</tr>
<tr>
<td>Availability of land</td>
<td>5.6</td>
</tr>
<tr>
<td>Convenience</td>
<td>5.5</td>
</tr>
<tr>
<td>Availability of unused premises</td>
<td>5.4</td>
</tr>
<tr>
<td>Existence of infrastructure</td>
<td>5.2</td>
</tr>
<tr>
<td>Lack of institutional control</td>
<td>4.8</td>
</tr>
<tr>
<td>Low taxes</td>
<td>4.7</td>
</tr>
<tr>
<td>Expectation of changes in land use</td>
<td>4.1</td>
</tr>
<tr>
<td>Ability to transfer and expand external business</td>
<td>3.2</td>
</tr>
</tbody>
</table>

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other Western countries. At first glance, it appears that
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cease doing so. This situation would not necessarily
involve the demise of family farming in Israel but it can
bring about a strong decline in the number of farms, a
reduction in the land farmed, and even the loss of what
is unique to the family farm tradition; familial continuity. Pluriactivity may also permit the family farms located in the vicinity of metropolitan areas to survive as a framework providing an alternative lifestyle but one that is influenced by their geographic location and local market conditions. Hence, in Israel the farm’s characteristics may vary by region. We would suggest that the existence of several types of pluriactivity provides evidence for the continuing construction of complex relations of production based on agriculture. These processes may induce the proletarianisation of a segment of the farming household’s members. Alternatively, we can state that in the majority of those farming households that do not confine themselves to agriculture, pluriactivity supports their farming activity. Farmers are, therefore, being supported in their attempts to invest in agriculture, which includes the upgrading of equipment and other resources, by the capital that they or their family members acquire from non-agricultural activity.

How will tomorrow’s rural space look? How will tomorrow’s moshav look? We have no immediate answers to these questions. Local development is linked to external forces and influenced by socio-political no less than economic factors. Israel’s rural space is being restructured in response to processes that create disparities along many dimensions; the moshav, like other types of settlement, is not immune to their influence. Questions pertaining to the distribution of the powers that may affect these external and internal factors, as well as to how these relationships impinge on the moshav, remain to be addressed in future research.

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