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Agricultural Cooperatives in Israel

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Abstract

Israel's agriculture is agriculture of cooperatives, with cooperative structures accounting for about 80% of agricultural production and agricultural services. This article traces the development of agricultural cooperation in Israel from its ideological origins at the beginning of the 20th century, through the formative decades of the 1920s and the 1930s when the organizational structure of the kibbutz and the moshav crystallized, and on to the vigorous growth and expansion in the independent State of Israel between 1948 and 1985. The article shows how the seeds of the financial crisis that struck the cooperative sector in 1986 had been sown during the expansion decades. Causes of the financial crisis are analyzed and the policies developed for its resolution are described in detail. Consistent implementation of these policies has led to impressive recovery of the agricultural cooperatives in Israel, culminating with the emergence of the New Kibbutz and the New Moshav in the first decade of the 21st century.

Keywords: agricultural cooperative, kibbutz, moshav, regional cooperation, multi-level cooperation, financial crisis, crisis resolution programs, restructuring of agricultural cooperatives, New Kibbutz

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Introduction

Agricultural cooperatives are responsible for about 80% of agricultural production and services in Israel. They are the product of ideology, government policy, and the implementation of effective work processes. They have dominated Israel's agriculture since the beginning of the 20th century, when they allowed individuals with limited means to pool their strengths and establish stable and successful production and service cooperatives. This laid the foundation for the development of some of Israel's most valuable resources – quality agricultural produce and agricultural innovation.

Government policy in Israel was initially highly supportive of agricultural cooperatives, investing considerable funds in developing cooperative activities and positioning cooperatives as the main production channel for agriculture. This allowed agricultural cooperatives to enjoy fast growth, expand activities, and accumulate significant political power, essentially monopolizing the agricultural market.

In the late 1970s Israel began a process of liberalization. Government policy changed, attempting to minimize government intervention in the market. The government reduced financial support to agricultural cooperatives and initiated steps to increase competition.

Most agricultural cooperatives in Israel were slow to adapt to these new market conditions, accumulating massive debts in an attempt to continue to function as they had in the past. By the end of the 1980s it was clear that rehabilitation plans were necessary in order to save the cooperatives – and the banks that had funded them, and effectively stabilize the Israeli economy.

Since then, agricultural cooperatives in Israel have undergone many structural changes, becoming decentralized, individualized, and specialized. Specifically, agricultural service cooperatives have become more flexible, vertically integrated, and market oriented.

This article reviews the Israeli experience in the field of agricultural cooperation, from inception until the present day. We hope that the article will offer useful insights into the role of government in the evolution of agricultural cooperatives and the measures that need to be taken to ensure survival of agricultural cooperatives under changing market conditions.

The beginning: ideology and necessity

Israel has never been a fertile ground for agricultural activities. Its climate consists of two distinct seasons – a cold and somewhat rainy winter and a hot dry summer,

with very short and unstable transitional periods between them. Aside from the difficult climate, Israel has extensive desert areas, which are hard to transform into vibrant agricultural centers. Moreover, Israel has not been blessed with an abundance of water resources – a key ingredient for most agricultural activities, and its agriculture traditionally had to rely mainly on the unstable supply of rainwater.

Until the mid-19th century, Palestine, a province of the Ottoman Empire where Israel was established in 1948, was largely a disease-infested swamp. At that time, large groups of Jewish immigrants migrated to Palestine from their home countries with a vision of founding a Jewish state (this first wave of Zionist migration to Palestine is known as the “First Aliya”). Cognizant of the fact that this future state would require agricultural resources to feed its people, many of the new immigrants devoted themselves to agricultural work, although none of them had an agricultural background.

At first, farmers did not come together in cooperative communities, but rather worked the land individually. One key factor was still missing before the idea of agricultural cooperatives in Palestine (and in the future – Israel) could come into fruition – ideology.

At the turn of the century, the Second Aliyah brought another wave of Jewish immigrants to Ottoman Palestine, primarily idealists from the Russian Empire. Most of these immigrants belonged to socialist movements, such as Poalei Zion (meaning “Workers of Zion”) in their home countries. Their strong cooperative values and socialist ideology were the final ingredients needed to motivate the creation of cooperative Jewish settlements in Palestine.

The first Jewish agricultural cooperative, Kvutza Degania, was established in 1909, at the southern tip of the Sea of Galilee in northern Palestine. Since the settlers themselves had no personal equity to contribute to their cooperative, the land on which the settlement was established was purchased with money donated by Jewish communities around the world. This was the case with all the agricultural cooperative settlements established before Israel became a state. A number of Jewish institutions, which oversaw the disbursement of moneys donated by Jews around the world, financed the construction of the settlements and the acquisition of machinery. The settlers themselves enjoyed free residency in the settlements in return for their work.

To summarize, if we ask ourselves why Israel’s agriculture became an agriculture of cooperatives, while agricultural cooperation is only a part of agriculture in other countries, these early years (before the establishment of the State of Israel) hold the answer. As mentioned, there was virtually no Jewish agriculture in Palestine until the 20th century. The Second Aliyah Jewish immigrants lacked financial means, needed jobs, and were greatly motivated to

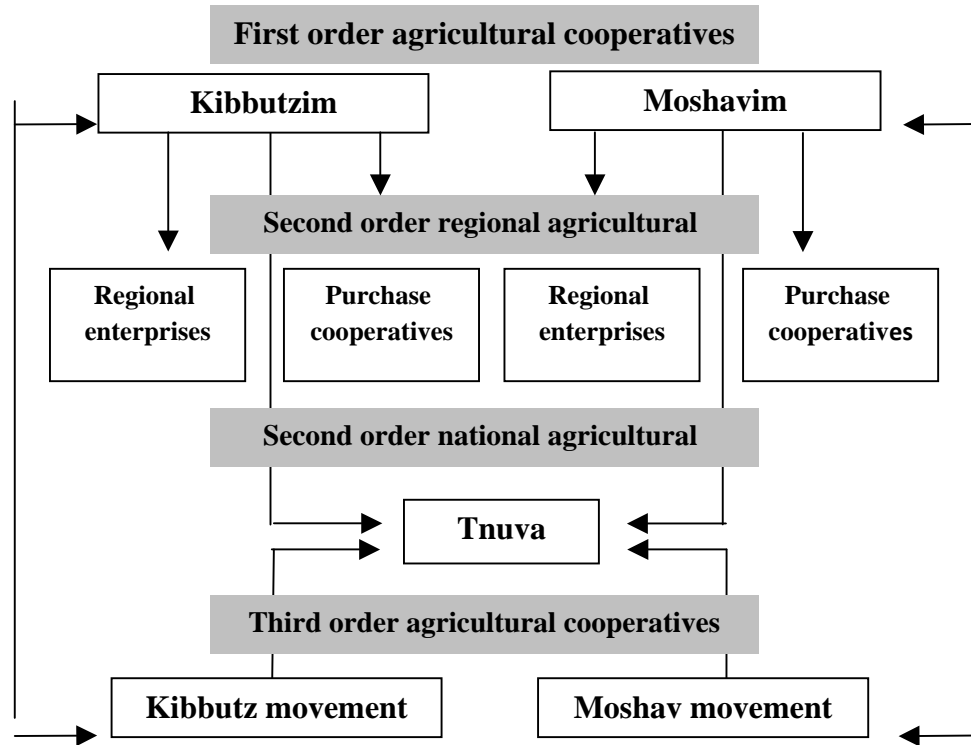
establish new settlements and through that take part in laying a foundation for the Jewish state. The immigrants' socialist ideals influenced the type of settlements they established – creating commune-style living. Responding to the lack of financial means and the need for employment among the immigrants, the Jewish institutions in Palestine chose to refocus these settlements and transform them into worker settlements, developing agricultural activities within them. Up until the establishment of the State of Israel, thousands of new Jewish settlers migrated to Palestine, many of them more than happy to join the growing cooperative community and create new agriculture-focused cooperative settlements, thus further developing the Jewish agricultural sector in a mainly cooperative framework. When the state of Israel was established in 1948, the existing stable cooperative structure continued to grow, emerging as a leader in agriculture. This is what made Israel's agriculture an agriculture of cooperatives.

The structure of agricultural cooperative system in Israel

During the first three decades of the 20th century, a multilevel cooperative structure was established by the Jewish agricultural community in Palestine (Figure 1). This structure remained stable until the financial crisis of the 1980s (the current structure will be discussed later):

- first-order agricultural cooperatives – kibbutzim (plural for “kibbutz”) and moshavim (plural for “moshav”);
- second-order regional agricultural cooperatives – regional enterprises and purchase cooperatives;
- second-order national agricultural cooperatives – Tnuva;
- third-order agricultural cooperatives – national kibbutz and moshav movements.

Figure 1: The structure of agricultural cooperative system in Israel: pre-1980s



First-order agricultural cooperatives

The kibbutz and the moshav are two forms of Jewish settlements. The kibbutz is a unique, worker-controlled, agricultural production cooperative, while the moshav is a service cooperative where the members are individual farmers residing within the settlement. The kibbutzim and the moshavim were managed democratically, holding communal meetings where members would vote on every decision.

While kibbutzim and moshavim were similar ideologically and politically, there were some significant differences between their organizational structures.

The main structural difference between the kibbutz and the moshav was that kibbutzim functioned as communes in every sense of the word – in kibbutzim (Figure 2), all members were workers in all agricultural and service branches within the settlement, assuming different roles in the kibbutz (managing a specific branch in the kibbutz, for instance) on a rotating basis. They equally divided the responsibilities, receiving no salary, but rather implementing an egalitarian system

of distribution of limited resources, which provided each of them a stipend in accordance with their living needs. The kibbutz also provided management and financial services to its members as well as consumer services, which included housing, childcare, education, and healthcare.

Figure 2: Kibbutz structure

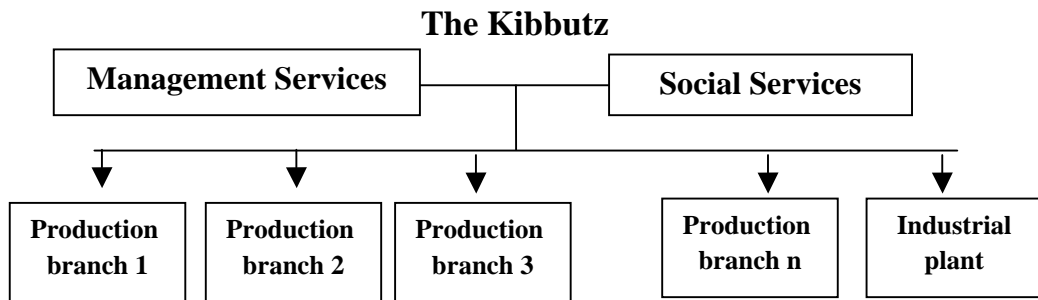
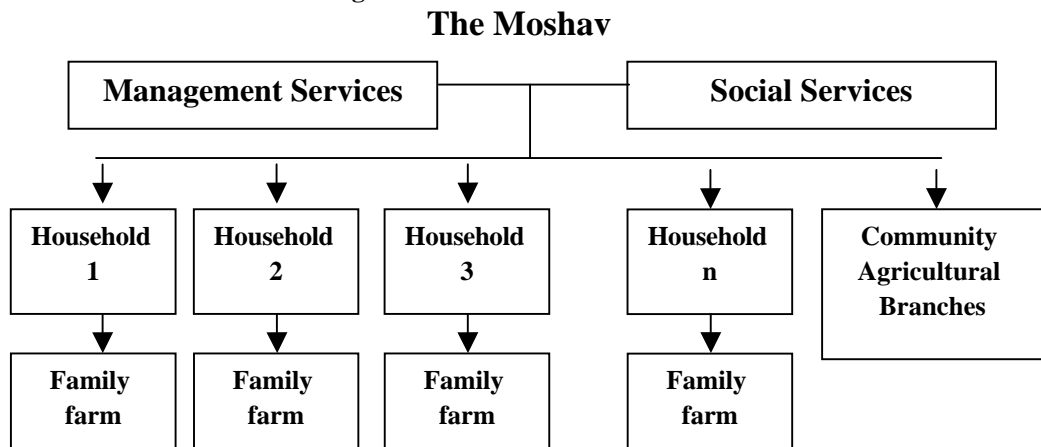


Figure 3: Moshav structure



Contrary to this, in moshavim (Figure 3), the moshav owned the rights to a number of communal agricultural branches, but in addition, each household was allotted a land plot of equal size to work individually and enjoy the income from selling its own produce. The moshav was a household oriented cooperative – members lived in family homes, where they worked, ate, and slept. For the most part, the moshav itself merely provided a joint framework for purchasing supplies, processing and

marketing produce, and joint ownership of some of the factors of production. In addition, as in the kibbutz, the moshav also provided management and financial services to its members (Kislev, Lerman, and Zusman 1976).

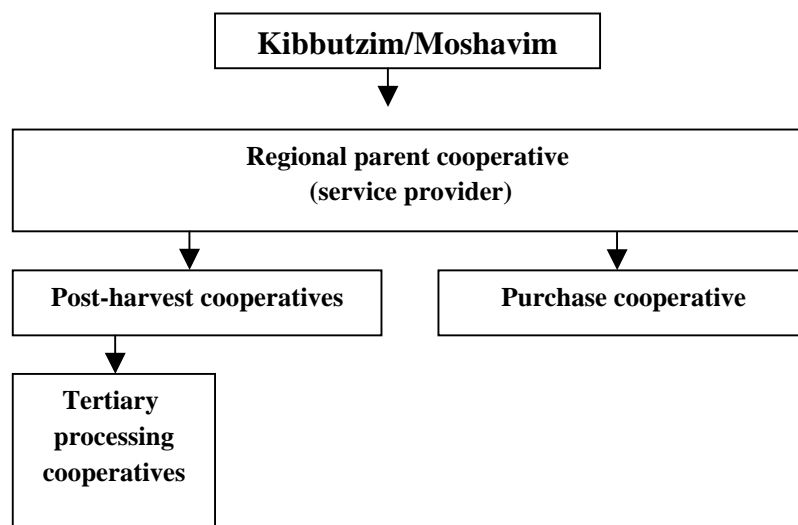
Second-order regional agricultural cooperatives

Second-order regional cooperatives included purchase cooperatives that procured agricultural inputs in bulk, at wholesale prices, and regional enterprises engaged primarily in post-harvest processing. Up to the 1980s, there were 11 kibbutz-owned regional cooperatives and five moshav-owned ones, each regional cooperative created by a group of 14-40 kibbutzim or moshavim. The regional cooperatives enabled their owners – kibbutzim or moshavim – to jointly purchase inputs and market or process produce at a lower cost than they would have been able to achieve independently.

Second-order agricultural cooperatives were first established in Israel in the 1920s. Representatives of the owners – moshavim and kibbutzim – sat on the boards of the second-order cooperatives; moshav and kibbutz members worked in regional cooperatives alongside with hired outsiders.

The structure of a second-order cooperative is schematically shown in Figure 4. Owned by either a group of kibbutzim or a group of moshavim, the regional parent cooperative had several subsidiaries providing production-related services to the members. Regional purchase cooperatives bought agricultural inputs and food; the purchase cooperatives also served as financial mediators for both the kibbutzim and the moshavim, using their accumulated equity to negotiate better credit terms for their members. Second-order cooperatives accumulated equity in the form of commission they regularly received from transactions with suppliers or from the marketing of agricultural products they processed for the first-order member cooperatives.

Figure 4: Control structure of a second-order regional cooperative



Second-order national agricultural cooperatives

These were second-order cooperatives that operated on a national level and offered mainly marketing services to their members (kibbutzim or moshavim). By far the largest second-order national cooperative in Israel was Tnuva, a marketing cooperative founded in 1926. Over the next few decades, hundreds of moshavim and kibbutzim joined in the cooperative ownership of Tnuva, receiving a share in the cooperative association and in return undertaking to market all their agricultural produce through Tnuva. Farmers transferred all their produce to Tnuva on consignment, with the kibbutzim/moshavim receiving payment after the produce had been sold and Tnuva's commission deducted.

Tnuva marketed a whole range of fresh agricultural produce – fruits and vegetables as well as poultry. Tnuva even acquired industrial plants for tertiary processing of agricultural produce. Its key asset was in dairy operations: Tnuva dairies provided milk-collection and dairy-marketing services for the majority of dairy farmers in Israel, exploiting economies of scale in marketing and processing and eliminating any regional advantage some farmers might have over others. Tnuva also acquired, and subsequently obtained, developed, valuable real estate.

Third-order agricultural cooperatives

The 1920s and 1930s saw the emergence of one national-level moshav movement, three large kibbutz movements, and a number of much smaller kibbutz movements, each uniting dozens of cooperative settlements under a single leadership organization. The decision to unite under a leadership organization was a matter of necessity: individual settlements faced financial and social difficulties and required political representation to promote their ideas and to develop. The national movements allowed their members access to various social services, providing financial mediation with the banks and accumulating political power, which was used to lobby on behalf of the members.

The movements established guidelines for their member kibbutzim/moshavim, instructing them on various issues, e.g., how to develop a business plan for investment. They also served as representatives for member interests when facing the government (the tax authorities, Ministry of Agriculture, Ministry of Trade and Industry, etc.). Since they began operation, the movements assumed responsibility for creating and developing new kibbutzim/moshavim, thus growing in size and increasing their power.

The kibbutz national-level movements had two main functions.

1. **Social, political, and guidance services** – These included political representation as well as guidance on issues related to developing and managing a kibbutz and its social services, such as childcare, education,

planning and zoning, and organization of cultural events. These services were paid for through membership fees.

2. **Financial mediation** – These activities included a financial fund and a purchase cooperative. The purchase cooperative (which is similar to a consumer cooperative in standard Western terminology) focused on providing consumer goods to members, such as low-priced clothing and furniture. The movement's financial fund borrowed from banks and distributed the loans to member kibbutzim on advantageous terms, essentially providing banking services to kibbutzim.

The structure of the moshav national-level movement was simpler. It similarly provided social, political, and guidance services, albeit on a smaller scale, and it did not engage in financial mediation.

Agricultural cooperatives in Israel – the early years

In 1948 the State of Israel was officially established. At that time, 177 kibbutzim and 77 moshavim were in existence (Central Bureau of Statistics 2008; Kislev 1990). Luckily for agricultural cooperatives, the newly formed government understood that developing stable agriculture was essential for the country's future, and so agricultural cooperatives received extensive support through tax reductions, protection from competitive imports, and considerable financial investments to further the development of agricultural technology. In addition, production quotas were imposed for every cooperative branch, thus ensuring there would be no overlap between cooperatives – no competition (Kislev 1990).

Unlike many developed countries, such as the U.S.A, where land is privately owned, 93% of the land in Israel is state-owned. The government manages land development and leases the land to kibbutzim and moshavim for extended periods of times, subject to certain restrictions (Kedmon 2012). These restrictions prohibit exchanging land use rights, sub-leasing of land, or dividing the land plot between heirs. Since the land was not owned by the kibbutzim or by individual members in the moshavim, a mutual guarantee system was implemented so that farmers could receive loans from banks even though they could not use land as collateral. The idea behind mutual guarantees was that all members of one's own settlement, as well as all members of the national movement with which the kibbutz/moshav was affiliated, acted as guarantors for the particular member's loan, pledging to repay the member's debt in case of default (Kislev, Lerman, and Zusman 1989). The mutual guarantee arrangements made it very easy for kibbutzim and for moshav members to take out loans for purchasing equipment and further developing their agricultural activities.

Thanks to government support, by the end of the 1970s, a mere three decades after the establishment of the State of Israel, agricultural cooperatives managed to significantly increase their production, profitability, and technological level. The value of agricultural production (in constant prices) increased nearly tenfold between 1950 and 1980, the agricultural value added increased more than sevenfold, and the technological level increased by more than a factor of four (Kislev and Vaksin 2003).² Cooperative agriculture earned Israel an international reputation as a provider of quality agricultural goods and a source of invaluable agricultural knowledge and innovation.

The late 1970s mark the end of the uninterrupted hegemony of agricultural cooperatives in the Israeli market. At this time, government policy began to change, leaning away from former socialist-based ideology that had supported cooperatives for decades. This, along with several other issues (which will be discussed later), drove most agricultural cooperatives into a deep financial crisis, which required massive restructuring for the cooperatives to survive and stabilize.

The crisis: its causes

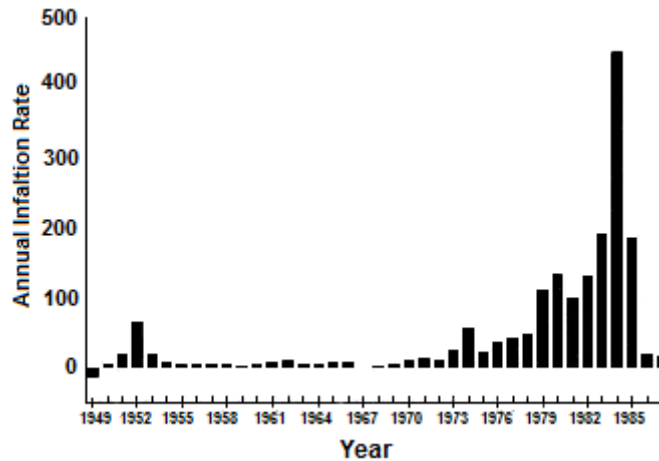
By 1985, most agricultural cooperatives in Israel were in a major financial crisis. The kibbutzim, moshavim, and their respective movements had accrued billions of dollars of debt to the banks. The crisis endangered the entire banking system in Israel and could lead to its collapse unless the government intervened.

Three players were responsible for the crisis – the government, the banking system, and the agricultural cooperatives themselves, with the 1970s oil crisis and its aftermath looming over them.

The role of government policy

The decade from 1975 to 1985 was a period of galloping inflation in Israel (Figure 5). The spending policies of the Israeli government during the 1970s necessitated printing money to cover budget deficits. This contributed to the increase in inflation rates in Israel, exacerbating the inflationary pressures caused by the world oil crisis of the 1970s, when the oil-producing countries began coordinating oil production and caused a surge in oil prices that triggered world inflation.

2 The technological level (or technological change) is the residual value added that remains after allowing for labor and capital inputs in the Cobb-Douglas production function.

Figure 5: Inflation rate 1949-1987

(Source: Kislev, Lerman, and Zusman (1989), p.3)

In May 1977, for the first time in thirty years of Israel's independence, the Likud liberal party won the national election and formed a new government instead of the traditional Labor governments. Yet Likud not only continued the policy of previous Labor governments financing government activities with budget deficits, but also increased these deficits, printing more money to cover the growing deficit and thus fueling the continued rise in inflation rates.

Unlike previous Labor governments, the new government was set on implementing drastic changes in the Israeli economy, attempting to minimize government involvement in market activities. Some of these changes and their outcomes are listed below.

Changes in currency mobility – The first major steps taken by the Ministry of Finance were to remove some restrictions on currency mobility and implement floating exchange rates³. As a result, approximately 600 million dollars held by

3 Until 1977, the economic policy in Israel was based on social-democratic values and exchange rates were fixed, with large changes implemented every few years mainly in order to adjust for the depreciation of the currency. From mid-1975 until the 1977 election, the government initiated a "crawling depreciation" policy through which frequent, but small, depreciations were implemented. Additionally, during the 1950 and the 1960s, government established multiple exchange rates – for exporters, importers, travelers, and more. The multiple exchange rates were intended to incentivize certain

Israelis abroad was repatriated, and the flood of new money threw the country into an inflationary spiral (Navon 2010). Annual inflation rates increased continuously (Figure 5), from 40% in 1977 to 110% by 1979 and ultimately 450% in 1984 (Navon 2010). This had a negative impact on production-based units, such as first- and second-order agricultural cooperatives, which needed stability and long-term planning to operate successfully. On the other hand, the high inflation rates eroded the outstanding debts of the cooperatives, and the erosion continued until government managed to reduce the inflation rate in 1985 (Kislev, Lerman, and Zusman 1989).

Elimination of subsidies – Another factor was the decision of the new government to eliminate some of the traditional subsidies for basic consumer products and essentially remove price controls. This caused a 60%-120% increase in consumer prices of basic products and a drop in demand (Navon 2010). Consequently, the real prices farmers received for products decreased steeply (Kislev and Vaksin 2003, p. 11).

Increase in interest rate and return to fixed exchange rate – In 1985, in an attempt to reduce the astronomical inflation rate, the government chose to increase real interest rates to 170%, thus hugely increasing the production costs. At the same time, the government froze the exchange rate, which meant that units producing for export or for import substitution – and agricultural cooperatives definitely fell in this category – were again the ones that bore the brunt of government policy.

The role of the banking system

The Israeli banks in this period were guilty of blatantly manipulating their stock prices to artificially boost investor profits and of failure to exercise due diligence in analyzing the creditworthiness of their borrowers.

The bank stock bubble – Between 1977 and 1983, lack of appropriate supervision allowed the Israeli banks to engage in stock manipulation with the objective of artificially increasing their value. The banks bought their own stocks on the exchange, investment advisors employed by the banks advised clients to purchase bank stocks as a safe investment, banks approved loans on condition that the lender purchases bank stocks, and more. These practices drove many investors, including the agricultural cooperative movements, to invest heavily in bank stocks. The new government, guided by its minimal involvement policy, did little about bank stock regulation during this period. In 1983, the entire Israeli stock market collapsed and took the bank stocks with it (Kislev, Lerman, and Zusman 1989).

foreign exchange activities over others. After the 1977 election, all exchange rates were combined into one single floating exchange rate.

The agricultural cooperatives were directly affected by the collapse, as their investment portfolios suffered a huge loss of value (agricultural cooperatives held in their portfolios 10% of all Israeli bank stocks). The collapse also affected the agricultural cooperatives indirectly: the financially troubled banking system, faced by stricter new supervision imposed by the government after the stock market collapse, had to reduce the availability of credit, raise prices for banking services, and generally change loan terms to boost banking profits.

Lack of due diligence – The banking system contributed to the unchecked growth of agricultural cooperative debt through lack of due diligence. The banks did not monitor the debt burden and creditworthiness of agricultural cooperatives from the late 1970s to the mid-1980s. This created a soft-budget situation for agricultural cooperatives. Banks continued to extend credit even to inefficient and unprofitable units, where loans obviously had no chance of being repaid.

The role of the agricultural cooperatives

The agricultural cooperatives themselves were guilty of pursuing every possible weakness that theory predicts for cooperative behavior. This included moral hazard, overinvestment due to inefficient decision-making, inadequate monitoring, mismanagement, and others.

Moral hazard behavior – As mentioned previously, agricultural cooperatives enjoyed favorable borrowing terms for years, thanks to the mutual guarantee system. However, this system provided fertile ground for moral hazard behavior. Agricultural cooperatives willingly went into debt to finance investments not only in production, but even more so in consumption assets (housing, vacations, etc.), even if repayment was far from assured (Kislev 2000).

Inefficient decision-making in the kibbutzim – Investments in developing industrial plants in kibbutzim were another important factor that contributed to their large debt. By the end of the 1970s, thanks to technological progress (for example, using a cotton harvester instead of manual cotton picking), agricultural production cooperatives had become extremely efficient. Kibbutzim found themselves with too many working hands. Changes in the business environment⁴ also left many without work. Since kibbutz members were not only workers but also owners, they could not be fired. A solution was required, and many kibbutzim chose to develop industrial activities within the kibbutz. This solution seemed reasonable at the time because, thanks to the mutual guarantee system,

4 To name but two – the international oil crisis in the early 1980s and the cheap, sweeter, oranges from Mexico that flooded the international markets in the early 1980s, significantly damaging Israel's sale of oranges – its third largest agricultural export product at the time.

cooperatives had a soft budget, which enabled them to take out loans and use that money to expand into new ventures. However, managing an industrial plant requires a different skill-set than managing a farm, something that was not addressed by the kibbutzim. Instead – as with all production and service branches in the kibbutz – a kibbutz member was appointed manager of the industrial plant. Between 1975 and 1985, 30-40 new industrial plants were built every year in the kibbutzim, most without preliminary market research. These industrial plants had no equity (they were financed completely through loans) and most closed down within a few short years, further increasing the kibbutz debt.

Inefficient decision making by second-order cooperatives – Regional enterprises made large investments in developing slaughterhouses, tertiary processing plants and machinery, without verifying market needs, but rather simply because they could easily obtain bank loans for impressive expansion.

Lack of control, insufficient monitoring, and mismanagement – Since their inception, most agricultural cooperatives did not prepare accurate, inflation-adjusted financial reports, and the reports that were prepared were, in many cases, outdated and irrelevant by the time they were published. In the kibbutz-owned regional enterprises, financial reports were completely irrelevant since, in order to avoid taxes, the regional enterprises either would give their kibbutzim a retroactive discount equal to the amount of the profit they had made or would take advantage of the tax legislation and roll the profit to their owners – the kibbutzim, who then paid taxes at a reduced rate on this additional profit. In both cases, the regional enterprises' financial reports always exhibited zero profits, making them irrelevant for assessing performance. In short, it was impossible to ascertain the financial situation of the various cooperatives at any given point in time (Oz 2007).

Another example of the cooperatives' insufficient monitoring and mismanagement was the fact that the second-order agricultural cooperatives and associations granted credit to members without regard to the members' ability to repay the loans (Kislev 2000).

The crisis: its resolution

By 1985, the debts of the agricultural cooperatives were growing with monthly compound interest and no means of repayment. By the end of 1988, the debt accrued by the kibbutz movements, the kibbutzim, and the kibbutzim-owned second-order cooperatives was valued at \$7.78 billion (CPI adjusted 2012 prices). The moshavim cooperative entities accrued a relatively smaller debt of \$3.04 billion (CPI adjusted 2012 prices). The banks could not absorb this mountain of debt, as the debt was 5.5 times greater than their total aggregated equity.

Government intervention was essential to prevent the collapse of both the agricultural cooperatives and the banking system. However, the magnitude of the debt was far greater than the entire state budget, and the government had to come up with some creative ways to refinance the debt (Kislev 2000). It is important to note that more than two-thirds of the kibbutzim debt and roughly the same proportion of the moshavim debt was not directly to commercial banks, but to cooperative financial intermediaries (financial funds and purchase cooperatives).

Cooperative ethics: the story of the Religious Kibbutz

The religious kibbutz movement (*Hakibbutz HaDati*), which was the third largest national kibbutz movement at the time, uniting its 16 Orthodox Zionist kibbutzim under the values of *Torah and Avoda* (religious values and their practical manifestation in manual labor), managed to avoid the pitfalls which led most of the other agricultural cooperatives into deep financial crisis. Why was that?

Saving, not spending: While the other kibbutzim, moshavim, their movements and second order enterprises chose to invest significant funds in stocks, real estate, further production development and better living conditions for members, the religious kibbutzim and their national movement chose to save for a rainy day. The religious kibbutzim significantly reduced investments and invested liquid assets in no-risk provident funds and insurance.

Ideological commitment: By 1977, the belief in the basic ideological ideals on which agricultural cooperatives were based had diminished significantly. The founding members had passed away or had reached old age and following generations did not have the same zealous attachment to the original ideology. Free riding and moral hazard behavior became more prevalent, resulting in a deteriorated work ethic and more interest in improving living conditions than in cooperative production (Kislev 2000). The religious kibbutzim, being both a religious and a socialist entity, had more tools with which to unify members, maintaining the original values to a greater degree (Gadish 2012).

Initially, two major settlements were reached, one for the moshavim and one for the kibbutzim. Later, it became clear that the kibbutz settlement was insufficient to resolve the situation, and a second kibbutz settlement was implemented, which led to successful recovery of the sector over time. A discussion of the three settlements follows.

The moshav settlement

In 1992 the so-called “Gal Law”, named after a Member of Parliament who was active in its adoption, was enacted to deal with the moshavim debt repayment plan. The main components of the law were calculating the debt repayment capacity for

every moshav member (personal debt and a fraction of both the moshav and the regional enterprises' debts) and forgiving the rest. The mutual guarantee system was completely eliminated. If a particular moshav member was found unable to repay any of his debt, it was all forgiven. In this manner no moshav would have to be dismantled. About 75% of the \$3.04 billion moshav debt (CPI adjusted 2012 prices) was forgiven (Rozolio 1999), but the repayment process is still ongoing. As part of the settlement, second-order moshav cooperatives ceased operation and their assets were sold to private parties (Kislev 2000).

The first kibbutz settlement

The first kibbutz settlement was signed in 1989 by the kibbutz movements, the banks, and the Ministry of Finance. The kibbutz debt settlement was not adopted as a law, but rather as an agreement reached by mutual understanding among all parties. The settlement covered 248 kibbutzim and applied to a debt of \$6.88 billion (CPI adjusted 2012 prices), with the rest forgiven by the banks. Similarly to the moshav settlement, a main component of the kibbutz settlement was calculating the debt repayment capacity for each kibbutz. However, the sum to be forgiven was predetermined and proved insufficient to cover the entire debt that could not be repaid by the kibbutzim. Moreover, unlike the moshav settlement, the mutual guarantee system still applied, allocating repayment of a fraction of the debt even to those kibbutzim that had not accumulated any debt.

The settlement also included the dismantling of the kibbutz movements' financial funds and purchase cooperatives.

Within a few short years it became clear that this settlement would not be able to resolve the kibbutz debt crisis, eliminating as it did only 25% of the kibbutz debt. Two main reasons for this were the following.

1. The debt repayment capacity assumed a fixed production level for each kibbutz, based on average production levels of previous years. In reality, in some years a kibbutz was able to earn more, while in other years it earned less and was unable to repay its designated debt for that year.
2. The debt repayment capacity calculation left the kibbutzim with no equity, as all earnings not used to cover costs or living expenses were meant to be used to repay the debt. Leaving the kibbutzim with no equity meant that they were unable to accumulate investment funds necessary for growth or development of financial independence.

Furthermore, the repayment capacity calculations assumed that the pension plan for the elderly would remain a budgetary pension – the working members today would finance the pensions of the elderly today. In reality, during the years of the crisis and its financial aftermath, many active members left the kibbutzim, and fewer working members remained to pay for current and future pension needs. The

settlement left no option for accruing equity. The coupling of these two factors meant that under the first kibbutz settlement, many elderly members would have soon been left with nothing.

In summary, the terms of the first kibbutz settlement were not realistic and could not successfully solve the kibbutz debt crisis. This led to the second kibbutz settlement.

The second kibbutz settlement

The second kibbutz settlement was signed in 1996, covering 214 kibbutzim. As part of this settlement, the mutual guarantee system was dismantled and the repayment capacity of each kibbutz was recalculated. Debt that the kibbutzim were not able to repay, known as the “balloon”, was meant to be forgiven by the banks, with the government absorbing 35% of the forgiven debt in order to assist the process.

Another important aspect of the second kibbutz settlement related to kibbutz assets:

- In the late 1980s and early 1990s, after the fall of the Iron Curtain, Israel experienced a large increase in immigration. In order to accommodate the newcomers, land was required. As part of the second kibbutz settlement, 1,910 ha in 46 kibbutzim were identified as suitable for a change in designation from agriculture to housing; this land was earmarked for transfer back to the state in exchange for these kibbutzim’s portion of the “balloon” debt (State Comptroller of Israel Report 2005).
- The kibbutz movements signed over 25% of their holdings in Tnuva, the largest second-order cooperative in Israel, to the government and the banks (State Comptroller of Israel Report 2005).

Following the Tnuva deal, many kibbutzim signed over their shares in regional enterprises in order to repay their debt and increase equity. The equity accumulated in this way was then used to establish pension funds, to which these kibbutzim began to contribute regularly.

Most of the kibbutz-owned second-order cooperatives continued their activities, unlike the case in the moshav sector, and today there are 8 active regional enterprises and supply cooperatives. All debt accrued by these second-order cooperatives was either deducted from their accumulated equity, rolled over to the members, or forgiven by the banks, in accordance with a special settlement designed for them.

One reason why kibbutz-owned second-order cooperatives were able to stay afloat, while the moshav-owned second-order cooperatives ceased operation, relates to the difference in control and management structures between kibbutzim and moshavim. In each kibbutz-owned second-order cooperative, there were only

15-50 shareholders – the member kibbutzim. In the moshav-owned second-order cooperatives, on the other hand, the shareholders were the individual moshav households in each of the 15-40 moshavim that owned the second-order cooperative (at least 1500 individual households). The large number of stakeholders, each fighting for their personal interests, made managerial decision making difficult.

Restructuring: adapting to a competitive environment

The agricultural sector in Israel has changed significantly following the crisis, losing its prominence as a leading sector in the Israeli economy. The share of agriculture in GDP fell from 4.8% in 1980 to 1.7% in 2008 (Applebaum and Sofer 2010a). By the year 2000, agricultural output had lost one-fourth of its value compared with 1980. The terms of trade in agriculture (the ratio between input and output prices) had also worsened significantly since the beginning of the 1980s, falling from an index value of 120 in 1980 to an index value of 60 by 2008 (Applebaum and Sofer 2010a). As incomes from agriculture began to decline after 1980, the occupation mix in moshavim and kibbutzim began to change also: many shifted from agriculture toward more lucrative occupations in commerce, tourism, and public services (Applebaum and Sofer 2010b).

However, while most changes paint a bleak picture of the recent experience of agricultural cooperatives in Israel, they also point to a sector that has shifted from functioning as a monopoly to a competitive mode, and with that come some positive aspects as well. These positive changes include a substantial increase in farm sizes despite the decrease in the number of self-employed farmers. In the kibbutzim, this enlargement became possible through the merging of agricultural units of nearby kibbutzim. In the moshav, agricultural production concentrated in fewer hands due to exits from agriculture, and so each farm became bigger. As a result of these processes farm efficiency increased, which compensated for the marked deterioration of the terms of trade since the beginning of the 1980s (terms of trade in agriculture, defined as the ratio between input and output prices, fell from an index value of 120 in 1980 to a value slightly under 70 by 2000 and 60 by 2008) (Applebaum and Sofer 2010a; Kislev and Vaksin 2003).

Restructuring the moshav: the fall of agricultural cooperation in the moshavim

Moshavim had always been family centered agricultural cooperatives. As the cooperative ideology began to disintegrate following the debt crisis, with many losing faith in its effectiveness, the moshav structure changed quite radically. Each household remained a separate independent unit within the moshav, but

cooperative operations were limited to mere necessities (Kislev 2000). Specifically, in 430 of the 442 moshavim in existence today, the moshav provides municipal services and limited business services to the independent farming units (households) within its borders (only 12 moshavim still employ the historical cooperative structure). The moshav no longer offers financial services to members. Communal production branches had been sold off as a unit to several moshav members, who created a new agricultural cooperative especially for the management of that unit.

In the past, the earnings from a family farm matched, and even exceeded, income from urban employment. As government policy shifted away from heavy support of agricultural activities, the economic environment became more competitive and agricultural activities became less profitable. The share of agricultural activities in employment decreased in moshavim, making way for an economic strategy of multiple, integrated sources of income (Applebaum and Sofer 2010a). Moshavim have also underwent significant social changes, which have had a negative impact on their cooperative nature. As part of government settlement policies, following large immigration waves from the former Soviet Union in late 1980s-early 1990s, many purely residential neighborhoods were built in moshavim, partly on land used in the past for communal production. These new moshav residents were not endowed with land for farming, nor did they share the veteran moshav members' cooperative ideology. This further reduced the moshav's link to cooperative agricultural activity (Applebaum and Sofer 2010b).

Currently, the moshav agricultural production is concentrated in a small, steadily decreasing, number of specialized farms, with the rest of moshav members focusing on non-agricultural activities, such as tourism or work outside the moshav (Applebaum and Sofer 2010b).

Restructuring the kibbutz

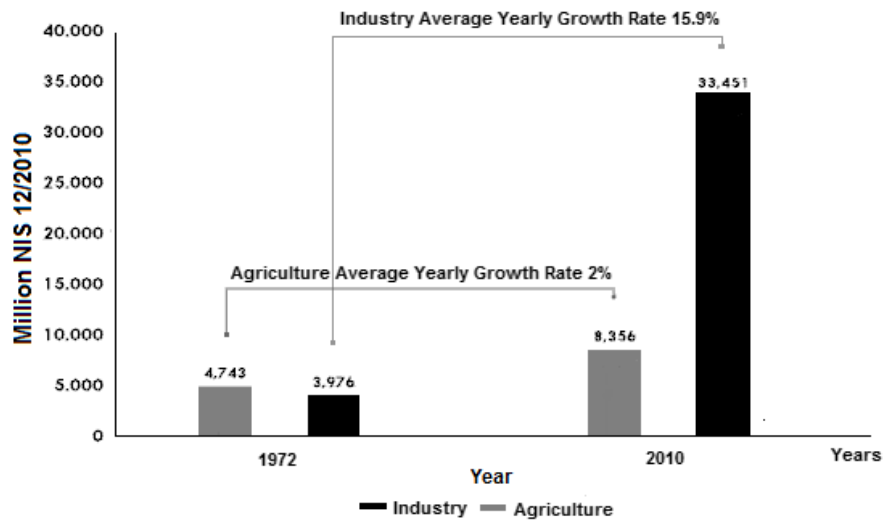
The cooperative nature of kibbutzim has also changed significantly over the last few decades, moving from a communal lifestyle to a more household oriented community (Kislev 2000). In most of the 286 kibbutzim in existence today, members earn a living individually either by working in the kibbutz agriculture and kibbutz-owned non-agricultural enterprises (e.g., agro-tourism) or by engaging in occupations outside the kibbutz.

The kibbutz agriculture has been divided into separate cooperative associations, which operate independently and competitively. They usually employ hired managers who are better equipped to successfully lead a competitive business.

The kibbutz industries have grown significantly over the last few decades, much more so than kibbutz agriculture (Figure 6), and have been mostly privatized. In the majority of cases, the kibbutz as an organization now owns only a small

share in the industrial plants, while the kibbutz members themselves are direct owners with the remaining shares divided between them. Their ownership is no longer mediated by the first-order cooperative.

Figure 6: Production growth of industrial and agricultural activities in kibbutzim



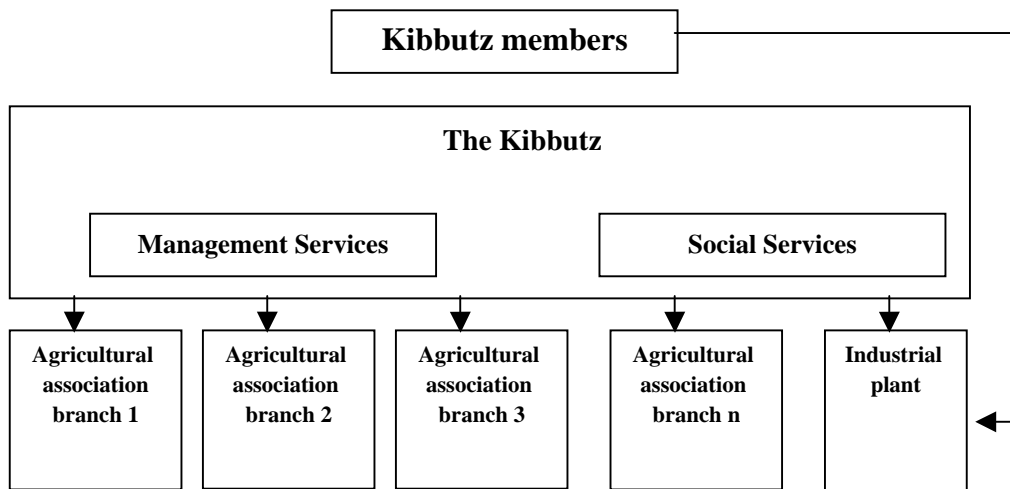
(Source: Kibbutz Industries Association – Yearly Review 2010, p. 10)

Wages in kibbutzim are now differential (Kislev 2000). A remnant of the past communal structure is a financial “safety net”, to which all members contribute a fraction of their earnings. The “net” guarantees minimal income to those who do not reach an agreed income threshold and finances some communal services, including limited management and financial services and some consumer services. Basically, the so-called New Kibbutz relies mainly on private work but also integrates certain levels of cooperation among members. This is the essence of the “differential model” (Figure 7), which, by 2009, had been adopted in 72% of the kibbutzim. The other 28% either retain the traditional cooperative model or follow a combined model that integrates collaborative lifestyles with personal gain (Palgi and Weber 2010). The kibbutzim that have adopted a collaborative model are the more financially stable ones, while the weaker kibbutzim had to restructure and accept the differential model (Kimhi 2003).

In essence, individualization has taken over the agricultural cooperatives. Another example of this is the acceptance of many new kibbutz members with a

new status: financially independent members, who do not take part in cooperative activities. Many kibbutzim also accept new residents who neither become “kibbutz members” nor work in agriculture (Applebaum and Sofer 2010b). The cooperative aspect of the current kibbutz life is confined mainly to social services. However, these too have changed. They are no longer distributed equally and for free among members, but rather paid for through local taxes.

Figure 7: The control structure of the New Kibbutz



Another major change in kibbutz life relates to retirement funds. As noted, in the past a budgetary pension was enacted; however, following the debt crisis, most kibbutzim were not financially stable enough to provide for the care of the elderly. Some kibbutzim sold their shares in regional enterprises to private entities in order to create retirement funds and have been allocating money to these funds since the early 1990s, but this might not be enough (Kislev 2000).

In 2008, as part of an effort to increase pension funds, Tnuva, the largest marketing cooperative in Israel, was privatized, with most kibbutzim and all moshavim transferring the remainder of their holdings to Apax Partners (as previously mentioned, within the framework of the second kibbutz settlement, 25% of kibbutz holdings in Tnuva was transferred to the state and the banks). As part of the Tnuva deal, the kibbutzim and moshavim were paid according to valuation of \$1.1 billion. The money received from the deal was divided among the thousands of moshav members and several three hundred kibbutzim. This was a difficult process due to the sheer size and complexity of Tnuva. The money was mainly

used for pension savings. The kibbutzim that did not sell their shares still own 23.3% of Tnuva and are represented by their purchase cooperatives.⁵

Taxation of kibbutzim has also contributed to the reduction in the actuarial debt. Traditionally, the kibbutz paid income tax as if it were a collective of identical individual households. All kibbutz production costs were subtracted from the value of production plus income from other sources to give taxable income. The taxable income was then equally divided among households in the kibbutz, representing each household's share in taxable income (to simplify calculations, every two kibbutz members were considered a household). The income tax was then assessed for each household separately allowing for the personal tax exemptions of the household members. The income tax deductions calculated for all households were then aggregated and that was the sum paid by the kibbutz as income tax on its taxable income.⁶

This system of income tax calculation for kibbutzim remained unchanged after the crisis. However, the agricultural branches that became separate cooperative associations could take advantage of Article 62 of the income tax ordinance, which states that an agricultural cooperative may choose at its discretion between paying taxes as a corporation (i.e., paying a corporate tax) or as a partnership. Because of this provision, the agricultural branches in the kibbutz, which are now organized as separate cooperative associations, do not have to pay corporate taxes, but can choose to be taxed as partnerships, and have their partner-owner (the kibbutz) pay income taxes on its taxable income. In certain circumstances, the income tax liability of the kibbutz calculated as described above may be less than the corporate tax liability of the constituent cooperative associations if treated as corporations, not partnerships. The tax saving created by exploiting the tax planning option in Article 62 can be used by the kibbutz as an additional source to reduce the actuarial deficit and finance social services for elderly members, such as pensions.

Restructuring the regional enterprises and the national movements

Following the financial crisis, kibbutz regional enterprises have been experiencing a continual reduction in revenue similar to that of the entire agricultural sector. The share of regional enterprises in total kibbutz industry revenue dropped from 23% in 1995 to 15% in 2007 (Kibbutz Industries Association – Yearly Review 2007, p. 23). In absolute terms, however, the sales of regional enterprises were increasing

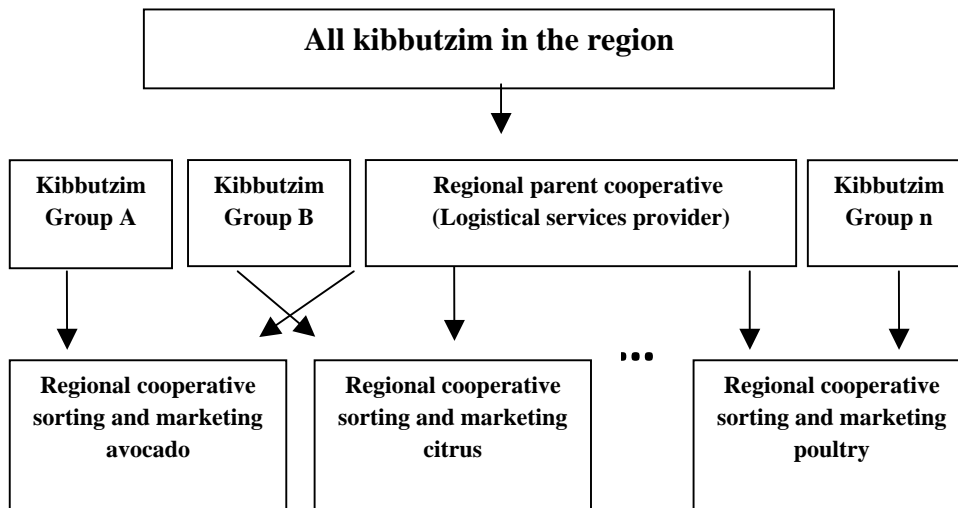
5 In May 2014, Apax sold its 56% share to Bright-Food, a Chinese state-owned food group. The transaction was valued at \$2.3 billion.

6 Dividing profit among households was done notionally, only for purposes of tax calculation. As mentioned above, kibbutz members did not actually receive a portion of the kibbutz profits, but rather a small stipend (“personal budget”), with all excess funds held and managed by the kibbutz.

during most of the previous decade, presumably due to an increase in specialized activities and the implementation of better monitoring systems, which led to higher efficiency. Between 1994 and 2007 (before the 2008 global economic crisis) their total turnover increased by 120% in constant prices (Kibbutz Industries Association – Yearly Review 2010, p. 6).

Since the crisis, structural changes have also been implemented in regional enterprises, following the national trends among cooperatives in Israel (Figure 8). They have become more users' utility oriented and more profit oriented. Today each kibbutz, as part-owner of a regional enterprise, receives a fraction of the profits based on its specific contributions to the enterprise (averaged over the last 10 years). This procedure has replaced the previous practice of each kibbutz receiving an equal share of the profits. Moreover, every regional enterprise under the parent regional cooperative became an independent cooperative association with its own specific owners from among the kibbutzim in its region – today owners of a regional enterprise are only the kibbutzim whose growers and farmers actually use its services. Some of these cooperative associations were partially privatized and became companies with shareholders comprising the regional cooperative as well as private investors. The regional parent cooperative is still owned by all the kibbutzim in the region, providing mainly logistical services to the regional cooperatives under its control and receiving a share of their profits in the form of management fees.

Figure 8: New control structure of second-order regional cooperatives

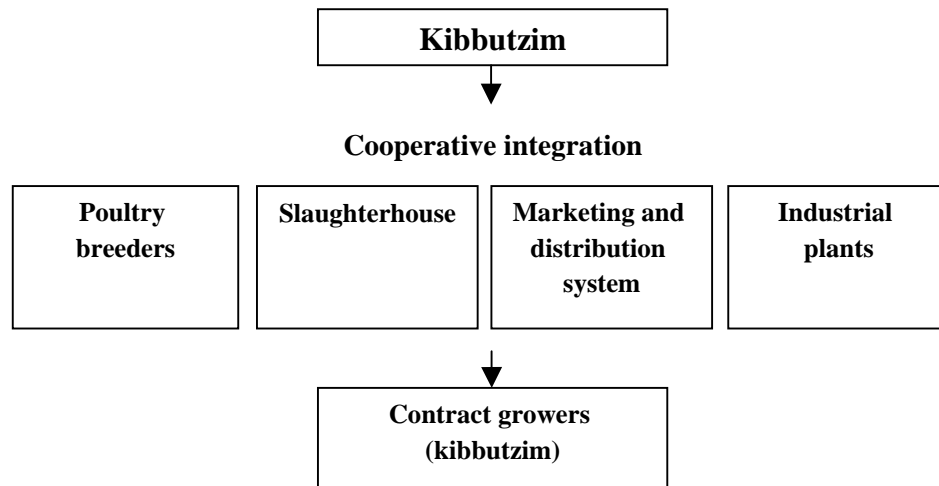


The dismantling of the mutual guarantee system, which provided a safety net for enterprises and members had they accrued any debt, forced regional enterprises to implement systems encouraging increased owner commitment to the enterprise. This was aimed at preventing situations in which a kibbutz might cease operation with an enterprise, its portion of the cost then being distributed among the remaining kibbutzim, thus incentivizing others to leave as well, endangering the enterprise's very existence. Regional enterprises today require a commitment from their owners to fixed costs (if an owner chooses to leave, that kibbutz is still liable for its fraction of the fixed costs).

Additional structural changes following the crisis include horizontal integration of regional enterprises – merging their operations allows them to take advantage of economies of scale in the current competitive environment.

Strategic changes were also made, substituting the push marketing strategy for pull. In a competitive environment it is the market needs that should dictate quantity, and so regional enterprises have become more market oriented, dictating to the growers (the kibbutzim) how much each will produce and when. Regional enterprises gained significant power, which enabled them to influence members' production decisions through vertical integration. In some branches, regional sorting and packing enterprises began marketing produce, and in others, such as poultry, some expanded not only to marketing but also to production to supplement their function as slaughterhouses (Figure 9).

The idea of vertical integration, which has been prevalent in western countries for many years, began picking up steam in Israel, especially in the poultry branch, at the beginning of the 21st century. In the past, kibbutzim would forward produce on consignment to the slaughterhouse (a second order regional cooperative), which would then forward it to Tnuva (a second order national cooperative), which would market it. Kibbutzim would only receive payment after the produce was sold, and every entity in the production chain covered its costs through commissions on sales. Today, the kibbutzim are contract growers: The cooperative integrated entity, which now includes the slaughterhouse, the marketing branch, input purchasing enterprises and more, owns the produce and pays the growers a salary. Therefore it can dictate the quantity expected from each kibbutz according to market needs. Thus, even though the kibbutzim are members and owners of the cooperative integration, in effect, they function as mere workers employed by it.

Figure 9: Integration in the poultry sector

A contributing factor to the development of vertical integration in Israel was a change made to the antitrust law in 2002 (Kachel and Finkelshtain 2005): the exclusion of marketing processed poultry from the agricultural exemption. This incentivized the regional enterprises (slaughterhouses), which now had to stop marketing through Tnuva, to provide marketing services themselves⁷.

In addition, in 2005, Agrexco, Israel's largest agricultural exporter (owned by Tnuva, several regional enterprises, and the state) collapsed, mainly due to its inability to adapt to a competitive agricultural market. Regional enterprises found themselves in a position to offer much needed marketing services to the kibbutzim, compensating for the failed company, and increasing integration in the agricultural sector in Israel.

Integration within regional enterprises was beneficial for kibbutzim, serving as a way to reduce risk in a volatile, competitive market. But in the process,

⁷ The Israeli Antitrust Law, first adopted in 1959, exempted all entities in the agricultural production chain – producers, wholesalers, and retailers – from restrictions on the creation of binding arrangements. This law was amended in 1962 and then in 1988, limiting the scope of the agricultural exemption to growers (farmers) and wholesalers, but not retailers, in an attempt to prevent the creation of retail cartels. Yet, retailers who are also wholesalers still enjoy the exemption and can create cartels through their holdings in wholesale companies (Kan 2010). In the European Union and the United States, for example, the agricultural cooperative exemption to the antitrust law applies only to farmers and farming organizations, not to marketing entities that do not produce themselves.

integration has marginalized them significantly, with power now in the integration entities' hands rather than in the kibbutzim's.

The national kibbutz and moshav movements have also undergone changes, one being the 1999 merger of the two largest kibbutz movements (the religious kibbutz movement and its religious kibbutzim opted out of the merger). This national movement, like the moshav movement, currently has two main activities: lobbying for its members and supplying social services. The movements' main goals are to preserve and further develop the moshavim and kibbutzim. The movements no longer participate in financial activities.

While in the past the movements enjoyed great political strength, their power has been significantly reduced since the crisis, with regional councils taking over many of the movements' previous roles.

Lessons from the Israeli experience with agricultural cooperatives

Unlike most other countries, the Israeli agricultural sector has always been primarily cooperative. This, coupled with the broad support given to the sector by the government, contributed to the stability of the agricultural sector for many years, enabling the rapid development of a highly productive and technologically advanced agricultural sector in Israel. When the country transitioned and became more liberal, the agricultural cooperatives had to be restructured in order to fit a now competitive market. As a result, the agricultural sector has endured massive changes, but continues to perform well in a more limited cooperative structure.

Nowadays, similarly to many countries around the world, the government still supports certain agriculture-related activities through subsidies and production quotas (milk and milk products, for example) (Cohen 2012), but for the most part agricultural cooperatives compete on a level playing field with private entities in the Israeli market and with importers from around the world.

The unique Israeli experience presents a number of important lessons concerning agricultural cooperatives, lessons that might assist infant economies (Israel was one of these not many years ago) in establishing a stable and successful cooperative-based agricultural sector. It also illustrates important issues relevant to developed economies. Some of these lessons are listed below.

- Agricultural cooperatives can play an essential role in the development and maintenance of a profitable agriculture. They can allow countries, even those with minimal resources, to effectively leverage existing resources and utilize them in an optimal manner, benefitting both the farmers themselves and the country as a whole. Agricultural cooperatives can minimize the risks inherent in agricultural activities by strengthening the farmers'

position in the market and offering a secondary source of income from their share in the cooperative profit. On the national level, efficient agricultural service cooperatives can supply citizens with relatively low-cost products and can establish and expand international relationships through centralized export and stable trade agreements.

- It is clear that government support – through investments in agricultural activities, tax reductions, subsidies, and lenient credit terms – is crucial for developing and maintaining successful agricultural cooperatives. However, when operations are not adequately monitored, this can lead to a crisis. Proper monitoring translates into efficient management and investment strategies by agricultural cooperatives, ensuring that government support is optimally utilized. The history of Israeli agricultural cooperatives provides examples of behavior contrary to these aims. Until the 1980s crisis, Israel's second-order regional agricultural cooperatives produced rudimentary financial reports, making it impossible to distinguish efficient entities from inefficient ones. Nor was it possible to ascertain what changes should be made to the latter in order to rehabilitate them. Utilizing government support mechanisms to implement effective growth strategies should have been a top priority. Without oversight, the service cooperatives focused instead on growing in size, diversifying activities, and distributing funds to their owners, primarily for political and personal reasons.
- A mutual guarantee system can increase financial leverage for cooperatives and enable speedy and steady growth. In Israel, the mutual guarantee system enabled agricultural cooperatives to develop and become technologically advanced and successful within a short period of time, all without personal assets or equity.
- While an efficient mutual guarantee system enables initial development and growth, sustainable agricultural cooperatives need to accrue liquid equity as reserves. This enables them to maintain stability when markets are volatile, as evident by the case of the religious kibbutzim production cooperatives during the 1980s crisis, which remained free of liabilities while their counterparts plunged into deep debts.
- Cooperatives are potential tools for rehabilitation in agricultural areas under economic stress. They can increase bargaining power through mergers and vertical integration, thus minimizing risk for farmers and strengthening the relationship between production and market needs.
- It can also be deduced from the Israeli experience that, once a country grows out of its economic infancy and adopts more liberal policies, the optimal structure is a decentralized one, based on individualized production

with cooperation confined to services that utilize economies of scale in order to effectively withstand a competitive market environment.

- Finally, government must present a clear long-term policy concerning agricultural development and support. As was evident during the crisis in Israel, once policy is short term, with frequent changes, agricultural cooperatives cannot devise stable growth plans and their decision making process is impaired.

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