State Formation, Ideological Competition, and the Ecology of Israeli Workers' Cooperatives, 1920–1992

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We investigate the effect of community-wide political and ideological interests on the failure rate of Israeli workers' cooperatives. Political order may be provided by the state or through membership in a federation. Independently, both conditions should reduce organizational failure, but when they coexist, the influence of the state should dominate due to its comparative advantages as a supplier of order. Organizations that represent rival ideologies cause ideological competition, which should increase failure, while organizations that represent shared ideologies cause ideological mutualism, which should decrease failure. The context of Israeli workers' cooperatives provides a natural laboratory for testing these ideas, as it spans the formation of the Israeli state. It also includes a powerful federation, the Histadrut, to which many cooperatives belonged, as well as significant populations of organizations representing both capitalist and socialist ideologies. The analysis supports all of the above arguments, indicating the relevance of interdependence, broadly defined, for the evolution of organizational populations.●

Interdependence between organizational populations is an understudied topic (Astley, 1985; Baum, 1996; Hunt and Aldrich, 1998). What research there is has tended to focus on economic and technological interdependencies (e.g., Barnett, 1990; Carroll and Swaminathan, 1992; Hunt and Aldrich, 1998), to the exclusion of political and ideological ones (Carroll, Delacroix, and Goodstein, 1990). Yet both political structures and ideologies can have dramatic effects on organizational outcomes. These effects are illustrated throughout history, for example, by the marked economic improvements that accompanied the reordering of power between the Parliament and the king in England's Glorious Revolution of 1689. Those changes have been attributed both to efforts to build a more economically effective structure of state power (North and Weingast, 1989) and to religious rivalry (Carruthers, 1990). Contemporary illustrations are also available, such as the differences in organizational behavior and performance that result from changes in and variance among political and ideological regimes in the transitioning economies of Eastern Europe (Stark and Bruszt, 1998).

The state, and federations of organizations that perform some of the same political functions, plays an important role in generating the ordered institutional framework that is necessary for organizations to flourish. Exchanges with the environment that organizations rely on are facilitated by an institutional framework that improves the efficiency and surety of transactions, generally speaking, order, and such a framework can be provided by the state or a federation. When a state and a federation compete to provide order, however, the effectiveness of the federation will be undermined.

Interdependence on the ideological dimension is also important. Other organizational populations can have an effect on the failure rate of a focal population as a function of the similarity or dissimilarity of their dominant ideologies. An ideology is a set of beliefs about how the social world operates, including ideas about what outcomes are desirable and how they best can be achieved. Just as organizations are used by

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participants to pursue economic goals, they are also used to pursue ideological goals. One way an organization can pursue its ideological goals is to discourage organizations that represent rival ideologies, suggesting that failure may increase as a function of the growth of organizational populations with rival ideologies.

In this paper, we investigate how political and ideological interdependencies affect the failure rate of Israeli workers' cooperatives.[1] The context of our analysis, spanning the period of state creation in Israel, amounts to a natural laboratory for examining the effect of state and federation on organizational stability. We can compare the failure rates of coops that experienced ineffective and effective institutional control provided by the state, the federation, or both. Building on past accounts that commercial banks generate ideological competition for cooperatives, we examine the effect of the growth of the bank population in Israel on coop failure. We also examine the mutualistic effect of the growth of populations that share the focal population's ideology. These populations can pursue their ideologies by buoying organizations of the focal population so that as they grow, the failure rate of the focal population will decrease. In the case of the coops, we look to credit cooperatives and to the kibbutzim as sources of this ideological mutualism.

INTERDEPENDENCE AND COOP FAILURES

Workers' Cooperatives in Israel

Workers' cooperatives are enterprises that engage in production, transportation, and service and that are based on utopian-socialist (from now on, socialist) ideology. In Israel, coops historically have accounted for between 1 and 2 percent of the nonagricultural workforce, a figure second only to Italy in the Western world (Russell, 1995). Israeli coops include or have included a number of organizations of great economic, cultural, and political significance, such as the dominant bus cooperatives, Egged and Dan, the influential national newspaper, Ha'Aretz, the Israeli Opera, the national theater company, Habima, and distinguished schools like Tichon Chadash. Coops in Israel are part of a broad cooperative sector that also includes credit, housing, and consumer cooperatives and the famous cooperative agricultural settlements, kibbutzim and moshavim.

Legally, the definition of cooperatives was vague, as indicated by the Cooperative Societies Ordinance of 1920: "Any Society which has as its object the promotion of the economic interests of its members in accordance with cooperative principles" (Viteles, 1966: 100), but effectively coops are identifiable as production, transportation, and service organizations that are worker-owned and pursue democratic organizing principles. The explanations for coops' founding are mixed, including economic and ideological motivations—to provide employment, income, and necessary services to Israel's urban population; to contribute to the creation of a new social order in which workers themselves manage their work; because they have advantages over structural alternatives in certain industries; and as a means of accumulating the capital or aid necessary to start a business (Daniel, 1976;

[1] We will use "coops" here to refer to Israeli workers' cooperatives, and "cooperatives" to refer to other cooperative organizations.

Russell, 1995). Even though the motivations for establishing coops were varied, socialist ideology was central among them.

Coops were established from the beginning of the resettlement by Jews in Palestine at the end of the nineteenth century, but coops founded before 1910 were extremely short lived because of a lack of material resources, institutional structure, and ideological support. The population only took hold after Poaley Zion, a Zionist political group in Poland, established a fund to support coops in Palestine (Daniel, 1989; Russell, 1995).

Political Order and Organizational Failure

The state is commonly viewed as the primary source of the institutional framework within which organizations operate (Campbell and Lindberg, 1990; Fligstein, 1990; North, 1990; Dobbin, 1994; Evans, 1995). Following Rueschemeyer and Evans (1985: 46–47), we define the state as "a set of organizations invested with the authority to make binding decisions for people and organizations juridically located in a particular territory and to implement these decisions using, if necessary, force." The state is an organizational actor which, at a minimum, attempts to maintain its authority by exchanging justice and order for revenue and power (North, 1981; Skocpol, 1985). The state has advantages in the provision of institutions due to the economies of scale of that role and its monopoly in legal coercion by violence (Weber, 1978; North, 1981). States also often have a particular capacity to confer cultural legitimacy on constituents and their practices (Meyer and Rowan, 1977; Dobbin and Sutton, 1998).

There are at least six dimensions of the influence of state institutions on organizational failure. The first is that the state may smooth exchange between its subjects by providing institutions that allow them to make credible commitments. This can be achieved if the state provides a legal system to protect property rights, decrease transaction costs, and enforce contracts (North, 1990). This function is particularly vital in modern economies, in which specialization and the division of labor give rise to the need for sustaining complex exchanges over time, across space, and between strangers. For such exchanges to be conducted without exorbitant transaction costs, one party must be able to trust the assertions of the other. An effective institutional framework facilitates this trust by penalizing actors who break the rules of exchange, for example, by applying legal sanctions to actors who violate contracts. This will assist organizations in their efforts to acquire through exchange the resources they need to survive.

Second, the state may affect organizational failure if it bails out specific organizations that are struggling. Such bailouts may reduce organizational failure but have a negative effect on economic productivity because they produce incentives for organizations to pursue subsidies from the state, rather than engage in forms of entrepreneurship that create gains to the economy (McFaul, 1995; Stark and Bruszt, 1998). Third, the state may affect organizational failure if it acts in a predatory fashion to confiscate the wealth created by organiza-

tions, for example, by levying arbitrary and exorbitant taxes (North and Weingast, 1989; Evans, 1995). Such predation can be expected to discourage organizational activity and increase organizational failure. Fourth, the state may affect the distribution of gains from exchange between consumers and producers by stipulating antitrust laws, which have been shown to affect organizational dynamics (Dobbin and Dowd, 1997).

While the first four forms of state influence can be expected to affect all organizations operating within the state, the fifth is the broad class of influences of the state on organizational failure in particular sectors. Evans (1995) detailed numerous ways that states act to create economic transformations, for example, by lending money or taking responsibility for high-risk activities such as research and development. Such efforts are overwhelmingly selective, aimed at promoting particular sectors over others. States may also favor particular sectors if parts of the state are "captured" by special interests representing those sectors. The sixth mechanism of state influence is also limited to particular types of organizations. The state may affect the legitimacy of particular organizational forms via its influence over the definition of organizational propriety. This influence may be concrete, as when a law requires a certain organizational practice or office, or intangible, as when myths of efficiency develop to justify a practice that the state endorses but does not enforce (Dobbin and Sutton, 1998). Legitimacy, in turn, affects organizations' capacity to obtain the resources they need to survive (Meyer and Rowan, 1977).

In this paper our focus is on the first of these six state influences on organizational failure, the provision of institutions that facilitate credible commitment and otherwise smooth subjects' exchange. This focus is dictated by the specific outcomes of the formation of the Israeli state rather than a belief that exchange regulation is more important than other forms of state influence on organizations. On the dimensions of bailouts, antitrust law, and sectoral influence, the transition from mandatory Palestine to the State of Israel had no effect on the coops. Neither the Israeli state nor the British Mandate bailed out failing coops (Ben-Geffen, 1958). This is understandable, because bailouts are typically given to organizations whose failure would bring deep and broad economic repercussions (Stark and Bruszt, 1998), and there are probably only two coops (Egged and Dan) that ever met this criterion. There was effectively no antitrust law during the Mandate (Friedman, 1975). While Israel does enforce antitrust legislation, variations of antitrust law would have a limited impact on the coops, because collusion is antithetical to their cooperative ideology (Daniel, 1976). As for sectoral influences of the state, the general perception is that the coops received little in the way of direct assistance from the mandatory government or the State of Israel (Ritov, 1977; Russell, 1995). Moreover, coops are a pan-sectoral population that would not be expected to rise and fall as a function of the state's promotion of particular sectors.

On the dimension of state predation, neither the British Mandate nor Israel committed anything resembling the wholesale exploitation of subjects exhibited by Zaire in the late-

twentieth century. Still, there is wide agreement that the Mandate operated in the interest of Britain's security and prosperity before that of Palestine (Gross, 1982). From 1923 on, the British policy was that Palestine should operate on a balanced budget, with revenues derived from domestic taxation. While it might seem fair to have insisted that Palestine live within its means, the expenditure patterns of the Mandate were decidedly colonial, with conservative estimates holding that 29 percent of expenditures over the 1919–1939 period went to administration of the government (Gross, 1982). Comparable figures for Britain itself over the same period and Israel in its earliest years are 5 percent and 15 percent, respectively (*Annual Abstract of Statistics of Great Britain*, various years; *Statistical Abstract of Israel*, various years). And some of the non-administrative expenditures of the Mandate appear to have been more in the interest of British foreign policy than Palestine's economy, such as the continuing payments to the French company that built and operated the Jerusalem-Jaffa railway inefficiently. So, it could be argued that the formation of the State of Israel represented a reorientation of state spending toward the interest of the local population, which would be expected to lower organizational failure rates, but this effect is likely to be small compared with the shift in the regulation of exchange.

Evidence for the broad claim that the exchange-regulation properties of state institutions contribute to organizational stability has tended to come from new-institutional history (e.g., North, 1990; Greif, 1994; Spicer, 1997). Non-historical evidence is probably rare because of the difficulty of finding organizational data that span state creation. Analyses of organizational failure have examined specific efforts of state regulation of exchange. Studies of populations as diverse as U.S. health maintenance organizations and telephone companies, Toronto day-care centers, Niagara Falls hotels, and Singapore banks have demonstrated that their failure is reduced by increasing government involvement in monitoring, certifying, authorizing, and endorsing the activities of organizations (Wholey, Christianson, and Sanchez, 1992; Barnett and Carroll, 1993; Baum and Oliver, 1992; Ingram and Inman, 1996; Carroll and Teo, 1998). Together, these examples are suggestive of the survival-enhancing effect of states that effectively regulate organizational exchange. In this paper we take for granted and do not attempt to explain the fact that some states are effective at providing exchange-regulating institutions while others are not. One explanation for the effectiveness of states in providing institutions comes from Rueschemeyer and Evans (1985), who attributed state effectiveness in interventions in the economy to the existence of organizational structures that produce a capacity for intervention and to state autonomy from the dominant class.

The political history of Israel (Palestine before 1948) provides a natural experiment for examining the effect of state regulation on organizational failure. Britain occupied Palestine in 1917 and, in 1922, was granted a mandate to rule there by the League of Nations. From the beginning, however, British rule struggled. The most significant problem was the conflict between Arabs and Jews, which shattered British hopes for

a unified political framework in Palestine. This, combined with poor prospects for economic gain by the British, resulted in a de facto abdication of many responsibilities of governance (Migdal, 1988; Shalev, 1992). As one official observed of Sir Arthur Wauchope, the long-serving British high commissioner in Palestine, he "loves greatly, administers with knowledge and imagination, but he does not rule" (Migdal, 1988: 165). Peretz Naphtali, the economist-author who came to Palestine in 1933 after a political career in Germany, put it this way: "If in other countries the State was, and still is, the focus of activities aimed at changing the socio-economic system by issuing laws and nationalizing economic branches, in Palestine of the mandate era this factor hardly acted in this direction" (Daniel, 1968: 22).

The effect of this institutional vacuum on organizations was predictable and is illustrated by Metzer's (1998) account of Palestine's banking industry from 1932 to the end of the Mandate. During that period the entry to the industry was "essentially unrestricted and its structure and operation unregulated, the government allowed virtually free and (officially) unprotected banking" (p. 113). The lack of a regulatory environment posed substantial risks, particularly for small banks and their customers. During a mild run on the banks in September 1935, the banking system almost collapsed. Coops suffered similarly, as indicated by Daniel's (1989: 39) observation that coops subject only to the British Mandate faced a "severe economical situation, difficulties in financing, lack of direction, lack of coordination in purchasing and marketing," and experienced an alarmingly high failure rate.[2]

In contrast, the State of Israel established in 1948 is an exemplary strong state, with its tremendous control of material resources, effective bureaucracy, centralized authority over potent armed forces, and large apparatus for the absorption of immigrants (Migdal, 1988). Therefore, a real shift in the power of state institutions to regulate exchange took place in 1948. Illustrative of the effectiveness of this institutional framework is that Israel's High Court operates with such procedural fairness that its rulings are accepted as legitimate even by Palestinians (Shamir, 1990). The establishment of the state thus represents a marked improvement in the regulation of exchange, and it should result in lower failure rates for coops:

Hypothesis 1: Coop failure rates will fall with the establishment of the Israeli state.

Hypothesis 1 is not meant to imply that the state monopolizes the institutional framework. Formal institutions of the state are buttressed by informal institutions established and maintained in social groups (Nee and Ingram, 1998). Nor is the state necessary for the existence of effective institutions. Neo-corporatists Streeck and Schmitter (1985) made an articulate claim for the role of associations (organized interests) as a distinct source of order, along with other sources of order, such as the state, community, and markets. If actors give the right to regulate to a corporate actor, it can establish rules of exchange and punish violators. We use the term federation to describe such a corporate actor. Besides enforcing

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Gross (1982) dissented from the view that the British Mandate neglected the role of governance of the economy. He credited the administration of the first high commissioner, Herbert Samuel, with laying the physical and institutional infrastructure for a modern economy in Palestine. By modern economy, however, Gross meant minimal intrusion by the state, rather than the form of commitment-enabling regulation that new institutionalists see as fundamental to economic growth. Gross himself characterized the British Mandate as taking "an extreme laissez faire position—minimal intervention, reacting only to pressure and specific requests, or—belatedly—to actual events" (p. 34) and noted a number of ways in which Mandate policies inhibited the economic development of Palestine.

honesty in exchange, federations reduce transaction costs for member organizations in other ways, such as by arranging loans between members, coordinating production, and managing competition. Hicks and Kenworthy (1998) found broad economic benefits of corporatist associations, including federations, in 18 affluent countries.

By far the most significant federation in Palestine and Israel has been the Histadrut, the General Federation of Jewish Workers in Palestine, which was founded in 1920. At various times it has included coops, workers' parties, unions, kibbutzim, moshavim, housing and consumer cooperatives, banks and insurance companies, construction companies, transportation and tourism companies, and Israel's largest conglomerate, Koor Industries. According to the Histadrut's constitution, it "unites all workers in the country to live by their own work without exploiting the work of others, having as its aim the handling of all settlement, economic and cultural matters concerning all workers in the country, the building up of a Jewish labor community in Palestine" (Slutzki, 1973: 11). The scope of activities undertaken by the Histadrut was even broader than that. It included provision of health care, security, education, and "foreign affairs"—coordinating activities with pioneering organizations abroad.

The direct influence of the Histadrut over the coops was through the Merkaz Hakooperatzia (Cooperative Center), established by the Histadrut in 1928 partly because of the problems the coops experienced under the British Mandate (Russell, 1995). Membership in the Merkaz was voluntary for coops but provided a number of concrete benefits, including automatic membership in the Histadrut and access to its services. This smoothed the exchange between Merkaz coops and other Histadrut subsidiaries. For example, the Histadrut directed its affiliated bank to create a special fund for the coops and asked its major marketing cooperative to make a special effort to sell the coops' products (Daniel, 1976). The Merkaz arbitrated disputes for members, provided auditing services, gave seminars in accounting and management, arranged bulk purchases of raw materials, and maintained a pension fund (Russell, 1995: 39).

Almost all of these activities can be understood as benefiting organizations by smoothing the exchange between them, either by facilitating credible commitment (auditing and dispute arbitration) or enabling collective action (bulk purchasing, management education, and maintaining a pension fund). The effects of federation membership may go beyond exchange smoothing to include, in some form, all of the six ways that states may affect organizations. In the case of the Histadrut and Merkaz, the most likely additional effect on the coops comes from the direct provision of resources. There was some attempt to do this, for example, through the establishment of the special fund, but the interpretation of coop participants was that the Histadrut and Merkaz did not directly provide significant resources to coops, and many promises to do so went unfulfilled (Daniel, 1976; Russell, 1995). Therefore, in the case of the coops, the benefit of federation membership appears to be of a form that mirrors the principal ben-

efit of state formation: the establishment of policies and practices that smoothed exchange.

Hypothesis 2: Coops that are members of the Merkaz will have lower failure rates.

An intriguing circumstance arises when a federation coexists with a state that has the capacity for managing an effective institutional framework. Under some circumstances, the state may free-ride on the order-generating ability of the federation, using it as a cheap source of necessary institutions (Hughes, 1985; Hechter and Kanazawa, 1993). For two reasons, we suspect that such symbiotic relationships exist only when federations are weak relative to the state. First, free-riding on powerful federations may curtail the autonomy that is required for the state to manage the institutional framework successfully (Rueschemeyer and Evans, 1985; Migdal, 1988; Grinberg, 1993). Second, by allowing a federation to decide and enforce the rules of the game for a significant segment of society, the state would be permitting a potential competitor to usurp its function (North, 1981).

The state may passively compete with a powerful federation by supplying the same institutional support that the federation supplies. In such instances, the state would appear to have a competitive advantage because it is larger and more inclusive than sub-state federations. These features allow the state to reap the economies of scale of institutional provision and to offer its subjects a wider range of exchange partners. Competition between state and federation may also be explicit, with the state acting to weaken and destroy a threatening federation. The Israeli state actively discouraged coops associated with the Histadrut. A significant mechanism of this discouragement was rhetorical attacks on the legitimacy of the federation and its affiliated organizations. This process is consistent with arguments that the state affects legitimacy, which is a key ingredient of organizational survival (Meyer and Rowan, 1977; Dobbin and Sutton, 1998), and helps to predict which organizations the state will legitimize or delegitimize. In such a struggle for power, the state's monopoly in the legitimate use of coercive violence is a distinct advantage.

There can be no doubt that the Histadrut, with its extensive institutional apparatus and multiple sources of power, was a rival for the Israeli state formed in 1948. In response, Prime Minister David Ben-Gurion and other leaders of Israel pursued an ideology of statism which called for "the subordination of all 'particularist' institutions, be they of the left or right, to the state" (Cohen, 1987: 7).[3] National objectives that had previously been pursued by federations such as the Histadrut were seen as within the legitimate domain of the state. Beyond that, "many of the principles and institutions that had been established by the labor movement over the years [were now seen as] obsolete and indeed harmful" (Near, 1997: 184). This attitude is succinctly summarized in a kibbutz member's recollection that [Ben-Gurion] "feared our strength, so he had to break us up. He didn't want any strong autonomous organizations, because he considered them a threat to the new State" (Lieblich, 1984: 119).

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The Hebrew word *mamlakhtiyut,* which we translate as statism, has semantic overtones that cannot easily be reflected in English. Mamlakhtiyut implies "something less precise but also broader and more powerful than the state" (Cohen, 1987: 203), hinting at "the grandeur of the biblical kingdom of Israel" (Near, 1997: 184, fn. 31).

Undermining of the Histadrut's power began almost immediately: its affiliated underground army was dismantled, and its education network was absorbed into the state system. Rhetorically, the shift in power away from the Histadrut to the state is illustrated by the state's use of honorific terms such as pioneer and volunteer, previously reserved for Histadrut members, which Ben-Gurion and others started applying to civil servants (Near, 1997: 184–185), thus shifting prestige from Histadrut members to state bureaucrats (Cohen, 1987: 218). These moves had three negative effects on the Histadrut's function as a federation. First, the nationalization of its education system eliminated its ideological hegemony. Second, it became less dynamic and innovative, more of an ossified labor bureaucracy (Cohen, 1987). Third, it responded to the government's pressures by aligning its objectives, policies, and structures with those of the state (Daniel, 1989). To be sure, the Histadrut remained a powerful federation in the post-1948 period, with control over workers that was at times formidable (Grinberg, 1993), but while the Histadrut continued to carry out many important functions, many others that were critical to organizations were assumed by the state. These effects lead us to predict the following:

Hypothesis 3: The reduction in the failure rate of coops that are part of the Merkaz will be smaller after the founding of the state.

One other consideration for modeling the effect of the Israeli state on coop failure is the ideology of the ruling party. The labor party dominated from the founding of the state until 1977, but from 1977 to 1992, the right-wing Likud party held or shared power. The Likud government did not represent a significant change in the institutional framework—efforts at economic reform consisted mainly of liberalization of the foreign-exchange market (Plessner, 1994)—but it did have a more hostile position to the labor movement and the Histadrut (Near, 1997) and may have had a negative effect on the legitimacy of Histadrut-affiliated organizations.

An Ecology of Ideology

Organizations become infused with and influenced by political ideologies such as socialism and capitalism through processes of selection, socialization, and intraorganizational politics (Simons and Ingram, 1997). Ideology represents a comprehensive world view, which includes opinions about the propriety of social arrangements. These opinions affect the structure and procedures that an organization itself uses, but they also affect its evaluation of other organizations. An organization that is dominated by socialist ideology will seem improper to participants in an organization that is dominated by capitalist ideology. Since behavior is guided partly by the pursuit of ideology, the perception that another organization is ideologically improper may result in actions to change or even eliminate that organization (Zald and Useem, 1987). Although it may not be their primary occupation, organizations compete in the ideological arena at the same time they compete in the economic arena. The most effective way for an organization to coerce another over issues of ideology is to withhold resources that the other relies on (Mizruchi, 1990). For example, in early twentieth-century Palestine, capi-

talist printers refused to print the socialist newspaper of the workers' party, *Achdut* (Daniel, 1989). The organizations that are capable of ideological coercion are those that directly or indirectly supply or could supply resources to the coerced organization.

The generators of ideological competition will vary by context, but one organizational form that seems particularly likely to generate ideological competition for the coops is banks. As in many other economies, banks in Israel are key resource suppliers throughout the economic system. Additionally, banks are ideal-type representatives of capitalist ideology, in contrast to the socialism of the coops. Ideological competition between banks and cooperatives has been seen in qualitative accounts from the United States and statistical analyses of cooperative founding in Singapore (Rothschild and Whitt, 1986; Teo et al., 1997). Mintz and Schwartz (1985) described the ideological influence of banks on large agricultural cooperatives in the U.S., where dependence on outside financing led the cooperatives to adopt capitalist organizing principles. Particularly germane to the current context, Simons and Ingram (1997) found that reliance on banks caused Israeli kibbutzim to adopt the capitalist organizing principle of hired labor. Further, the growth of banks may also harm coops indirectly by generating a relative advantage to the non-cooperative competitors of coops, which are more likely to receive loans, and on better terms (Jackall and Levin, 1984).

The issue of hired labor illustrates that the prediction that banks will increase coop failure does not require an assumption that banks follow a conscious policy of destroying coops. For capitalists, hired labor may seem perfectly rational when the marginal product of labor exceeds the wage rate. From this position, a bank could encourage a coop to hire labor from the belief that it would increase profits and reduce the likelihood of the coop failing. Hired labor, however, can undermine the cohesiveness that contributes to the performance and survival of coops. Further, self-labor as opposed to hired labor may be more efficient even without considering cohesion in industries in which supervision of hired labor is difficult (Russell, 1985). Illustrative of the Histadrut leadership's concern about banks' potential influence is an article titled "Capital Yes, Capitalism No!" which asserted, "We shall not, under any circumstances, abandon the essential principles of the workers' society's establishments, because we must distinguish between 'capital' assets and 'social assets'" (Daniel, 1968: 29).

Hypothesis 4: The failure rate of coops will increase with the growth of the bank population.

Just as ideological differences cause organizations to attempt to change or harm each other, ideological similarity should produce supportive behavior between organizations. For example, Achdut, the workers' party that capitalist printers would not serve, ultimately had its paper printed by a cooperative printer, also called Achdut, which it helped found (Daniel, 1989). Organizations can generate ideological mutualism by sharing experience and information, providing patron-

age, money, encouragement, and legitimacy, and by cooperating in efforts at political influence. Evidence of mutualism between organizations that share ideologies in Israel comes from Ingram and Simons' (1999) study of experience sharing between kibbutzim. They found that the performance benefit an organization receives from the experience of another is a positive function of the similarity of their ideologies. Other studies of kibbutzim have found helping behavior between organizations that share ideologies (Katz, 1995; Near, 1997).

Israeli credit cooperatives are a likely population to generate ideological mutualism for the coops. Credit cooperatives are cooperative financial institutions, the socialist analogs of banks. In Israel, they had an explicit emphasis on supporting cooperative organizations and the little man and on helping borrowers that were neglected by commercial banks (Heth, 1966). They could help coops directly by making loans without asking for compromises on socialist organizing principles, such as hired labor. Another population likely to generate ideological mutualism is the kibbutzim. Kibbutzim have been the economic and ideological leaders of the Israeli cooperative sector. They have played an important role in the Israeli economy in both agriculture and industry during the period we study and could therefore be socialist exchange partners for coops. For example, the kibbutz Shefea'im, which is now a leader in Israeli tourism, entered that industry in the 1950s by building a rest house for bus drivers of the Egged coop. Shefea'im has a strong mutualistic relationship with Egged to this day. Kibbutzim have also played an important role in Israeli politics, with their members being overrepresented in the parliament and in the leadership of the army, and could therefore assist coops from these vantages.

Hypothesis 5a: The failure rate of coops will decrease with the growth of the credit cooperative population.

Hypothesis 5b: The failure rate of coops will decrease with the growth of the kibbutz population.

METHOD

Data

Our analyses are based on data Russell (1995) collected from the archives of the Registrar of Cooperatives and of the Merkaz on 1,448 coops that were founded before 1992. We supplemented them by consulting a number of archival sources.[4] Through these sources, we were able to identify 83 additional coops, almost all founded before 1930. With these additions, the number of coops in our data corresponds well with numerous counts of coops from 1920 onward (Daniel, 1989). We were also able to make a number of corrections and fill in missing values in Russell's data. Particularly important for an analysis of organizational failure, we identified failure dates for 108 of the 128 coops for which that information was missing. The remaining 20 coops were excluded from the analysis. Since our earliest archival material was from 1920 and we found only two coops that were founded before 1919, analysis begins in 1920 with no real problem of left-censoring. Our observation period ends in

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Most of the archival materials we consulted were located at the offices of the Cooperative Registrar in Jerusalem, the Merkaz in Tel Aviv, and at Machon Lavon, the main archive for the labor movement, located in Tel Aviv. The materials included the original records of the Registrar and Merkaz; the government's official "Rashumot," in which every dissolution (of any registered cooperative or firm) has to be noted; *Shituf*, the Merkaz's periodical, in which reports of coops' activity as well as dissolution sometimes appear; *Luach Hacooperatsia*, the Merkaz's annual digest; the files of the workers' councils (Moetzet Poalim) for the largest cities; reports of Merkaz conventions; Kapei's (a Zionist organization that helped cooperatives) report published in *Haadama*, vol. 1 [1920], no. 9; and Viteles' (1929) census.

1992, and coops still operating then are treated as right-censored.

Of the 1,511 coops in the data, 104 appeared to be Arab coops by virtue of their names, locations, and political affiliations. The Arab coops often were founded as a convenient legal structure to develop a supply of water or electricity to a village, without an active organization behind the legal structure. Such coops are distinct in both ideological and operative terms from the Jewish coops, and therefore it is reasonable to expect that they would be affected differently or not at all by forces that influence the failure rate of Jewish coops. Consequently, we excluded Arab coops from our analysis, as did Don (1968) in his analysis of coop growth.

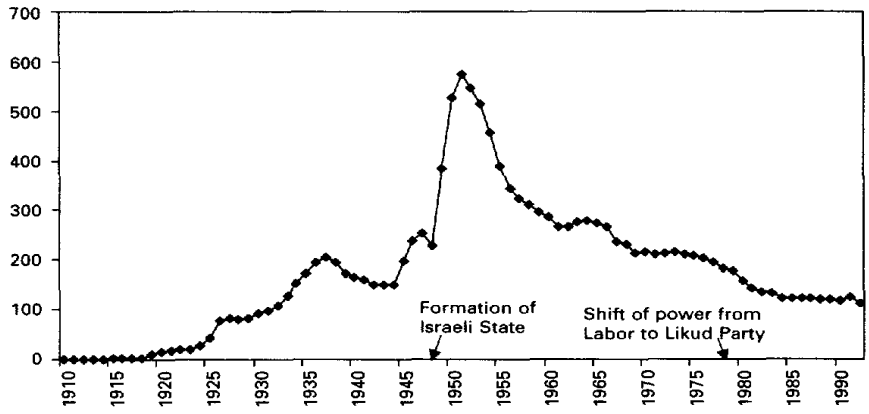
Figure 1 shows the number of coops for the years of our analysis. Of the 1,407 coops in our analysis, 1,255 failed during the period we studied. Forty-three coops disappeared from the population through merger. Since mergers may occur for different reasons than failures, we followed other analyses of organizational failure by treating those coops that ended with a merger not as failures but as right-censored (Hannan and Freeman, 1989). The other data in our analysis came from a number of sources, including Bank of Israel (1979, 1996, 1997), Gurevich (1930, 1947), Bank Leumi (1977), and Gross and Greenberg (1994) for commercial banks, Heth (1994) for credit coops, Near (1997) for kibbutzim, and the *Statistical Abstract of Israel* for 1989 and 1997, Janowsky (1959), Szerezewski (1968), and Halevi (1979) for macro-economic variables.

Analysis

We modeled coop failure using r(t), the instantaneous risk of failing. This hazard rate of failure is defined as the limiting probability of a failure between t and t + Δt, given that the coop was operating at t, calculated over Δt:

$$r(t) = \lim_{\Delta t \to 0} \Pr \frac{(\text{failure } t, t + \Delta t \mid \text{ operating at } t)}{\Delta t}. \qquad (1)$$

Figure 1. Number of Israeli workers' cooperatives.



Parametric estimates of the hazard rate require assumptions about the effect of time (in these models, age) on failure. We used the piecewise-exponential model, which allows the rate of failure to vary in an unconstrained way over preselected age ranges. Constants (baseline failure rates) are estimated for each age period. We estimate a piecewise-exponential model of the form:

$$r(t) = e^{\beta X} e^{\alpha_1}, \text{ if } t \in I_1, \quad (2)$$

where X is the vector of covariates, β the associated vector of coefficients, and α_1 is a constant coefficient associated with the *l*th age period. Life histories of each coop were broken into one-year spells to incorporate time-varying covariates, yielding 14,632 spells. The reported results are maximum-likelihood estimates obtained using the statistical package TDA (Röhwer, 1997).

A methodological issue identified by Carroll and Teo (1998) is the endogeneity of institutions. Powerful organizational forms can be expected to affect institutional change in their favor (Wade, Swaminathan, and Saxon, 1998), yet political institutions are treated as exogenous in analyses of population dynamics. Statistically, this problem is extremely difficult to solve because processes of institutional and population dynamics operate at different levels and vastly different rates (Carroll and Teo, 1998). In our analysis, however, the endogeneity of political institutions should not be a serious methodological concern. The coops did not have significant influence over the institutions that benefited them. Further, organizational forms that did affect institutional change in Israel, like the kibbutzim, are included in our models. Additionally, our control variables include cohort effects for coops existing at significant points in Israeli history (e.g., the founding of the state) to explicitly model the idea that organizations are affected differently by institutional change depending on whether they exist at the time of the change (Carroll and Teo, 1998).

Variables

The dichotomous variable *Israeli state,* coded 1 for years after 1948, should have a negative effect, according to hypothesis 1. *Merkaz affiliation,* a dichotomous variable coded 1 for coops that were affiliated with the Merkaz and therefore the Histadrut, should have a negative effect, according to hypothesis 2. Hypothesis 3, which asserted that Histadrut membership is less of a benefit in the presence of the state, was tested by an interaction between the Israeli-state and Merkaz-affiliation variables. The interaction term should have a positive coefficient. We included *Likud government* as a dichotomous variable, coded 1 for the years 1978 to 1992, and interacted it with Merkaz affiliation to test the possibility that membership in that federation was less beneficial when the right-wing Likud party was in power.

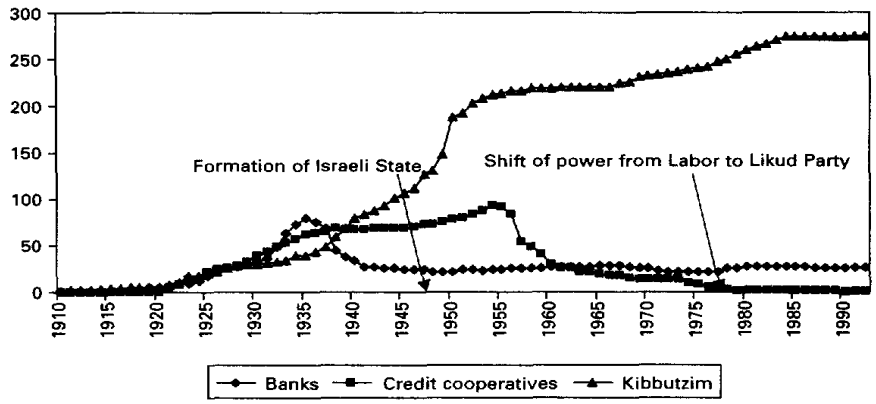
We used *bank density,* the number of commercial banks that existed in a year to test hypothesis 4. Based on observations that the concentration of Israeli banks has increased (Shalev,

1992), we also estimated our models using the total assets and total demand deposits of banks to represent the growth of the population. These models yielded results comparable to those reported below. Bank density, total assets, and total demand deposits excluded the Bank Hapoalim, which is a commercial bank affiliated with the Histadrut. We used *credit-cooperative density* and *kibbutz density* to test hypotheses 5a and 5b. Figure 2 shows bank, credit-cooperative, and kibbutz densities over the period of the study.

The Appendix describes the large number of control variables, along with the results, that we used to create a well-specified model of coop failure, which includes the influences other than those hypothesized that may affect the failure rate of coops. At the organizational level, the control variables are age, size, industry, geographic location, and founding conditions, which include the era of founding, and the levels of immigration and unemployment at the time of founding. Contemporaneous measures of the macro-economic environment include gross domestic product, unemployment, and calendar year. A set of density measures (of coops similar to the focal coop, of all coops, and at founding) capture competition and legitimation processes in the population. We also controlled for religious affiliation, as coops could be affiliated with other federations than the Merkaz.

Table 1 reports basic statistics and correlations for all variables. The correlations are moderate except where we would expect them to be high, as with interactions and squared terms. The notable exception is the kibbutz-density variable, which is highly correlated with Israeli state and calendar year. These correlations are not surprising given the monotonic rise of this population (see figure 2 above), but the correlations raised the possibility of multicolinearity, which by inflating standard errors, can make hypothesis testing less efficient (Johnston and DiNardo, 1997). To test for multicolinearity, we estimated models with and without the kibbutz-density variable. The substantive results of all variables were the same in both cases, although standard errors were larger (and t-values therefore smaller) for some variables when kibbutz density was included, but this effect was not strong enough to change our evaluation of the significance of

Figure 2. Densities of banks, credit cooperatives, and kibbutzim.



coefficients at conventional levels. Kibbutz density is a substantively important variable in our analysis, and we include it in the models reported here since its inclusion does not change the interpretation of the results. Because the support for our hypotheses is stronger in models without kibbutz density, this can be seen as a conservative approach.

RESULTS

Table 2 shows the results for the variables that test our hypotheses. All of the models include the control variables, coefficients for which appear in table A.1 in the Appendix. Model 1 includes the state and Merkaz variables and is a significant improvement over the baseline model including only the control variables ($\chi^2 = 189.00$, 3 d.f., $p < .01$). Model 2 adds Likud government and the interaction between Likud government and Merkaz affiliation and improves on model 1 ($\chi^2 = 15.52$, 2 d.f., $p < .01$). Model 3 adds the variables representing populations of rival and shared ideologies and improves on model 2 ($\chi^2 = 16.94$, 3 d.f., $p < .01$). Since model 3 contains all the variables that test our hypotheses and is an improvement over all previous models, we refer to it when describing the results.

The negative coefficient of Israeli state indicates that, as predicted by hypothesis 1, the failure rate of coops is lower when the state exists. The negative coefficient of Merkaz affiliation indicates that, as predicted by hypothesis 2, membership in the Histadrut lowers the failure rate. The coefficient of the interaction of Israeli state and Merkaz affiliation is positive. This indicates that the benefit of Merkaz affiliation is less when the state exists, consistent with hypothesis 3. The effect of order-generating organizations on coop failure is illustrated by figure 3, which compares the rate of failure for coops that are affiliated with the Merkaz to unaffiliated coops. From the creation of the Merkaz in 1928 until the creation of the state in 1948, Merkaz-affiliated coops experienced a substantially lower failure rate, approximately one-sixth that of nonaffiliated coops. The figure indicates a jump in the failure rate of Merkaz coops with the establishment of the state in 1948. At the same time, coops that are not affiliated with the Merkaz face a lower failure rate after 1948, benefiting from the inclusive institutional framework

Figure 3. The effect of order-generating organizations on coop failure.

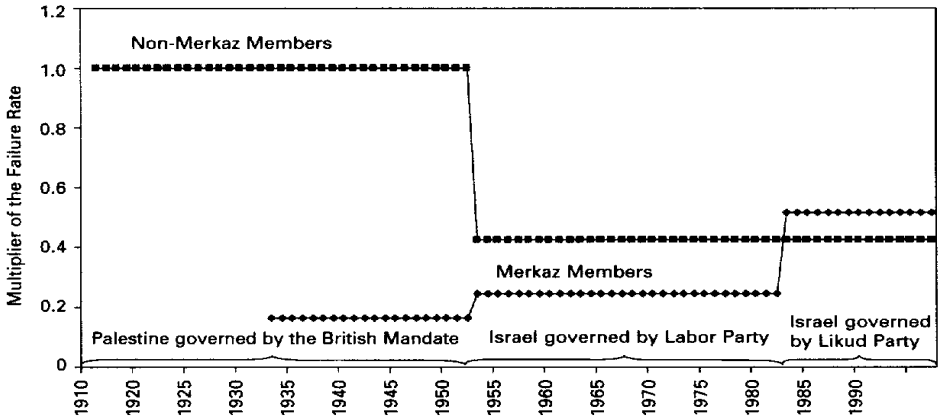


Table 1

Basic Statistics and Correlations

Variable	Mean	SD	1	2	3	4	5	6	7	8
1. Israeli state	0.75	0.43								
2. Merkaz affiliation	0.70	0.46	.38							
3. Israeli state x Merkaz affiliation	0.60	0.49	.71	.80						
4. Likud government	0.15	0.36	.25	.10	.18					
5. Likud government x Merkaz affiliation	0.12	0.33	.22	.25	.31	.88				
6. Bank density	27.29	11.85	−.50	−.21	−.35	−.09	−.08			
7. Credit-cooperative density	44.46	31.86	−.27	−.11	−.23	−.56	−.50	.11		
8. Kibbutz density	185.50	73.66	.91	.39	.66	.46	.41	−.54	−.43	
9. Age	11.97	12.99	.32	.24	.30	.54	.52	−.16	−.55	.49
10. Absorptions	0.06	0.57	.03	.07	.06	.05	.07	−.02	−.06	.05
11. Founded post–1948	0.51	0.50	.59	.24	.43	.15	.12	−.30	−.16	.55
12. Founded post–1952	0.20	0.40	.29	.09	.18	.29	.23	−.13	−.45	.37
13. Founded post–1967	0.06	0.24	.15	−.03	.02	.34	.21	−.09	−.32	.24
14. Founded post–1977	0.01	0.10	.06	−.04	−.01	.24	.13	−.02	−.14	.12
15. Immigrants/1000 at founding	76.29	84.65	.39	.17	.30	−.06	−.05	−.19	.16	.29
16. Unemployed/1000 at founding	15.57	12.24	.52	.18	.36	.18	.14	−.29	−.22	.53
17. Tel Aviv	0.42	0.49	−.16	−.14	−.15	−.04	−.05	.08	.03	−.16
18. Jerusalem	0.09	0.29	−.04	−.02	−.04	.00	−.01	.01	.00	−.03
19. Haifa	0.16	0.37	−.02	.07	.04	−.01	.02	.02	.04	−.02
20. Other locations in center	0.14	0.34	.11	.04	.07	.02	.01	−.04	−.01	.10
21. South	0.04	0.19	.11	.06	.10	.04	.04	−.05	−.08	.12
22. Religious affiliation	0.04	0.20	.09	−.32	−.26	.01	−.08	−.05	−.03	.09
23. Personal transport	0.03	0.18	−.14	−.01	−.08	−.03	−.01	.11	.05	−.14
24. Motor freight	0.09	0.28	.05	.13	.10	.08	.10	−.03	−.09	.09
25. Delivery	0.03	0.16	.05	.05	.07	.02	.04	−.04	−.03	.06
26. Education	0.02	0.15	.04	−.02	.00	.06	.02	−.03	−.07	.07
27. Laundry	0.03	0.16	.03	−.01	−.02	.01	−.02	−.02	−.01	.03
28. Misc. production	0.03	0.18	.03	−.05	−.03	−.06	−.07	−.01	.06	.00
29. Bakery	0.12	0.32	.11	.13	.14	−.03	.00	−.07	.00	.09
30. Wood and carpentry	0.07	0.25	.01	.05	.04	.01	.04	.01	−.02	.00
31. Printing	0.06	0.24	.02	−.04	−.03	.05	.03	−.03	−.06	.04
32. GDP	27.22	30.20	.50	.21	.37	.81	.72	−.24	−.79	.72
33. Unemployed/1000	26.43	18.25	.60	.24	.43	.44	.38	−.29	−.24	.67
34. Calendar year	58.10	15.94	.72	.32	.53	.68	.60	−.39	−.69	.91
35. Local density	3.26	3.74	.09	.04	.10	−.17	−.14	.02	.27	.01
36. (Local density)^2	24.61	49.26	.09	.03	.09	−.16	−.13	.02	.27	.00
37. Density	269.35	138.87	.45	.16	.28	−.39	−.35	−.25	.67	.22
38. (Density)^2/1000	91.83	92.33	.39	.12	.24	−.33	−.29	−.25	.66	.16
39. Density at founding	234.89	133.07	.50	.20	.37	.03	.03	−.26	.03	.47

Variable	21	22	23	24	25	26	27	28	29	30	31	32	33
21. South													
22. Religious affiliation	.01												
23. Personal transport	−.04	−.04											
24. Motor freight	.04	−.06	−.06										
25. Delivery	−.03	−.04	−.03	−.05									
26. Education	.05	−.03	−.03	−.05	−.03								
27. Laundry	−.02	.10	−.03	−.05	−.03	−.03							
28. Misc. production	−.01	.13	−.04	−.06	−.03	−.03	−.03						
29. Bakery	.11	−.01	−.07	−.11	−.06	−.06	−.06	−.07					
30. Wood and carpentry	.02	−.02	−.05	−.08	−.05	−.04	−.04	−.05	−.10				
31. Printing	−.01	.07	−.05	−.08	−.04	−.04	−.04	−.05	−.09	−.07			
32. GDP	.10	.05	−.07	.11	.04	.09	.02	−.06	.00	.01	.07		
33. Unemployed/1000	.09	.05	−.09	.05	.03	.05	.02	.00	.04	.01	.03	.58	
34. Calendar year	.12	.07	−.11	.11	.06	.09	.03	−.04	.05	.00	.06	.93	.64
35. Local density	−.10	−.01	−.02	.07	−.03	−.05	−.07	−.17	.43	−.02	−.03	−.19	.01
36. (Local density)^2	−.08	.01	−.04	−.01	−.04	−.06	−.06	−.09	.44	−.04	−.05	−.18	.02
37. Density	.01	.04	−.06	−.05	.00	−.04	.02	.09	.06	−.01	−.05	−.40	.13
38. (Density)^2/1000	.00	.03	−.05	−.06	−.01	−.04	.01	.09	.04	.00	−.05	−.38	.12
39. Density at founding	.13	.17	−.15	−.03	.15	.01	.03	.11	.11	−.02	−.04	.14	.31

Table A.1 *(Continued)*

Variable	9	10	11	12	13	14	15	16	17	18	19	20
10. Absorptions	.14											
11. Founded post–1948	–.20	–.10										
12. Founded post–1952	–.15	–.05	.48									
13. Founded post–1967	–.13	–.03	.25	.52								
14. Founded post–1977	–.08	–.01	.10	.21	.40							
15. Immigrants/1000 at founding	–.11	–.05	.68	–.22	–.12	–.04						
16. Unemployed/1000 at founding	–.19	–.11	.82	.63	.22	.30	.35					
17. Tel Aviv	.03	.11	–.21	–.11	–.06	–.03	–.16	–.18				
18. Jerusalem	–.03	–.04	–.04	.05	.02	–.02	–.10	–.01	–.28			
19. Haifa	.05	–.04	–.01	–.07	–.04	–.02	.08	–.05	–.37	–.14		
20. Other locations in center	–.02	–.04	.15	.03	.01	.00	.14	.10	–.34	–.13	.17	
21. South	.04	–.02	.16	.17	.06	.05	.04	.19	–.17	–.06	–.09	.08
22. Religious affiliation	–.03	–.02	.15	.07	.08	–.02	.09	.13	–.04	.05	–.07	.09
23. Personal transport	.01	.38	–.17	–.08	–.05	–.02	–.12	–.15	.03	.07	.01	–.05
24. Motor freight	.14	.06	–.11	–.02	–.01	–.03	–.11	–.08	–.12	.02	–.04	.01
25. Delivery	.00	–.02	.06	.10	–.02	–.02	–.02	.12	.05	.03	.01	–.02
26. Education	.00	–.02	.03	.14	.07	.15	–.07	.08	.05	–.04	.03	–.04
27. Laundry	.06	–.02	.01	–.08	–.04	–.02	.03	–.03	.01	.02	–.07	.05
28. Misc. production	–.11	–.02	.11	.01	.01	.01	.07	.08	.02	.03	.01	–.03
29. Bakery	.03	–.02	.12	–.03	–.07	–.04	.14	.08	–.12	–.06	.00	.11
30. Wood and carpentry	.05	–.02	–.02	.03	–.06	.01	–.03	–.01	–.12	.00	.02	.08
31. Printing	.13	–.03	–.04	.03	–.04	.00	–.06	.00	.06	.04	.04	–.09
32. GDP	.66	.07	.31	.45	.41	.24	–.01	.35	–.08	–.01	–.02	.04
33. Unemployed/1000	.38	.04	.36	.22	.15	.25	.21	.41	–.09	–.03	–.01	.06
34. Calendar year	.63	.07	.43	.45	.35	.19	.11	.46	–.13	–.02	–.03	.07
35. Local density	–.10	–.02	.05	–.15	–.13	–.07	.14	.00	.17	–.20	–.17	.09
36. (Local density)^2	–.13	–.03	.08	–.12	–.10	–.05	.16	.03	.09	–.15	–.14	.12
37. Density	–.32	–.03	.27	–.20	–.19	–.11	.43	.16	–.09	–.02	.02	.06
38. (Density)^2/1000	–.32	–.04	.24	–.22	–.17	–.09	.41	.13	–.08	–.02	.02	.05
39. Density at founding	–.14	–.08	.71	.22	–.06	–.08	.43	.71	–.14	.00	.06	–.12

Variable	34	35	36	37	38
34. Calendar year					
35. Local density	–.12				
36. (Local density)^2	–.12	.93			
37. Density	–.16	.29	.29		
38. (Density)^2/1000	–.19	.28	.29	.98	
39. Density at founding	.31	.13	.14	.37	.32

provided by the state. Merkaz-affiliated coops still enjoy a shield from failure post-1948 (the coefficient of Merkaz affiliation is larger than the coefficient of the state-Merkaz interaction, $\chi^2 = 33.70$, 1 d.f., $p < .01$), but the failure gap between affiliated and nonaffiliated coops narrows in a striking way. Starting in 1978, as the anti-Histadrut Likud government gains power, the figure shows a higher failure rate for Merkaz-affiliated than for unaffiliated coops. The source of the jump in the Merkaz-affiliated failure rate is the positive coefficient for the interaction between Likud government and Merkaz affiliation. Statistically, Merkaz-affiliated and nonaffiliated failure rates are the same after 1978, as indicated by a chi-squared test showing that, together, the interactions of Israeli state and Likud government with Merkaz affiliation offset the main effect of Merkaz affiliation ($\chi^2 = .62$, 1 d.f., $p \approx .43$).

Two variables measuring ideological interdependencies, credit-cooperative density and kibbutz density, both have negative coefficients. These results support hypotheses 5a and 5b and the idea that populations that share the focal population's ideology would generate a mutualistic benefit. The neg-

Table 2

Piecewise Exponential Models of Israeli Workers' Cooperative Failure, 1920–1992*

Variable	Model 1	Model 2	Model 3	Model 4
Israeli state	−0.963**	−0.813**	−0.855**	−0.912**
	(0.205)	(0.208)	(0.321)	(0.321)
Merkaz affiliation	−1.821**	−1.826**	−1.808**	−2.600**
	(0.176)	(0.176)	(0.175)	(0.391)
Israeli state x Merkaz affiliation	1.364**	1.281**	1.262**	1.609**
	(0.194)	(0.196)	(0.197)	(0.258)
Likud government		−0.133	0.079	0.063
		(0.268)	(0.271)	(0.271)
Likud government x Merkaz affiliation		0.710**	0.740**	0.722**
		(0.241)	(0.242)	(0.242)
Bank density			−0.009*	−0.012**
			(0.004)	(0.004)
Bank density x Merkaz affiliation				0.019**
				(0.008)
Credit-cooperative density			−0.009**	−0.008**
			(0.003)	(0.003)
Kibbutz density			−0.009*	−0.009*
			(0.004)	(0.004)
Log–likelihood	3733.83	3726.57	3718.07	3715.23

* $p < .05$; ** $p < .01$.
* Standard errors are in parentheses. Each model includes the control variables shown in table A.1 in the Appendix.

ative coefficient for bank density, however, contradicts hypothesis 4, which predicted that banks would generate ideological competition. This is particularly surprising in light of the evidence, from Israel and elsewhere, that commercial banks harmed cooperatives. To further explore this result, we estimated model 4, which included an interaction between bank density and Merkaz affiliation. The model is a significant improvement over model 3 ($\chi^2 = 5.68$, 1 d.f., $p < .05$), and the interaction term is positive. Thus, it seems that banks only generate ideological competition for coops that were affiliated with the Merkaz, while generating ideological mutualism for unaffiliated coops. This may be because Merkaz coops, linked as they were to the Histadrut, were perceived by banks as being closer to the core of socialist ideology. If so, banks would have seen Merkaz coops as more ideologically threatening and therefore more worthy of ideological competition than non-Merkaz coops. This explanation is true to the processes of ideological competition we described when developing hypothesis 4 but refines our original idea about which coops would be perceived as sufficiently socialist as to engender ideological competition from banks.

DISCUSSION

Miliband (1969: 1) said of humans in society that they are "political beings, whether they know it or not." We would say precisely the same of organizations. Like studying a photographic negative, studying the coops brings to the light what is hidden by the dark of the modern-capitalist economy. Organizations rely on institutional frameworks, which may be provided by states or federations, to enable basic exchange. The state, driven to maintain its own autonomy and power, does so at the expense of its rivals and their subjects. And organizations are infused with political ideologies that they pursue through their interactions with other organizations.

For new institutional historians, our finding that the formation of the Israeli state lowered the failure rate of coops will be a welcome but unsurprising confirmation of an untested bedrock principle. Other social scientists have underattended to the state's capacity to affect organization by regulating exchange (Campbell and Lindberg, 1990) because "much organizational and economic scholarship comes from the United States, where a belief in laissez faire obscures the role of the state in markets" (Dobbin and Dowd, 1997: 501). Even in the United States, however, the state's exchange-regulating institutions vary over time and across sectors and thus contribute to differences in the performance of organizational populations (Campbell and Lindberg, 1990; Dobbin and Dowd, 1997). And, of course, there are important economies that lack the necessary foundation of exchange-regulating institutions, and that fact explains the typically miserable outcomes of their organizations, such as the very high failure rate of financial organizations in the institutional vacuum created by Russian mass privatization during the early 1990s (Spicer, 1997).

Attention to the role of the state in providing exchange-regulating institutions also facilitates the recognition that non-state federations, like the Histadrut, can fill this role. A theory of institutional constraint of organizations can encompass both the state and federations as providers of institutions. For organizational theorists, this may provide a new lens for interpreting the increasingly common observation that organizations form groups and that these groups affect the performance of their members. Thus, we foresee a theoretical apparatus that could account for the benefits of federations as diverse as Japanese trade associations (Schaede, 1998) and coalitions of traders in the eleventh-century Mediterranean (Greif, 1994). Efforts to explain the contribution of federations to political order would be welcomed by neo-corporatists such as Streeck and Schmitter (1985: 3), who attributed the late recognition of the role of organizations in the provision of order to a failure of organizational theory.

The moderating effect of the establishment of the state on the advantage of Histadrut membership suggests something previously unrecognized about the relationship between organizations and the state. While organizations, and federations of organizations, may serve the state by providing order, there is a limit to this role. At some point, order-providing organizations move from the role of agents to that of rivals. Realizing this is important for two reasons. First, conflict between the state and organizations over the provision of order has occurred in other times and places, for example, the Catholic church in Europe before the reformation, the Hudson's Bay Company, and the British East India Company. Current instances of organizations that appear to rival their states are Hamas in the Palestinian Authority, the Zapatistas in Chiapas, and perhaps even the mafia in Russia. In the future, multinational corporations may threaten the autonomy of the states that host them, and probably do so already. Our arguments and evidence suggest that these eclectic examples may be understood as instances of a type of organizational competition for political power, which is amenable to

theory and systematic analysis of its antecedents and outcomes.

The rivalry between the state and the Histadrut is also valuable because it contributes to a theory of the state. The response of the Israeli state to the Histadrut supports our conceptualization of the state as a set of organizations that pursues power and autonomy to govern—simultaneously serving as an actor and an institutional system. The view of the state as a particular organizational actor, with interests and capabilities, facilitates its inclusion in a theoretical system and makes it possible to consider why and when the state will act to affect organizations. We have shown the state competing to maintain power and autonomy. Others emphasize the state as an intermediary between competing populations that struggle to capture its coercive capacity for their own economic and ideological purposes (Haveman and Rao, 1997; Wade, Swaminathan, and Saxon, 1998). These positions and others are compatible, but they all require a concept of what the state is and why it does what it does. Such a concept is missing from current organizational theory, in which the common practice is to recognize that prohibitions and endorsements of the state affect organizations, without considering the causes and timing of those acts (Carroll and Teo, 1998).

A final caveat on the relevance of our findings for understanding the influence of the state on organizations is that the Israeli context dictated a particular emphasis on the exchange-regulation role of the state. Even so, our analysis did give a prominent role to the capacity of the state to affect the legitimacy of organizational forms and, therefore, their survival. Rhetorical attacks on legitimacy were a key mechanism by which the state undermined the Histadrut and its affiliated organizations and were stronger when the right-wing Likud governed the state. Of the other state influences, antitrust regulation, bailouts, and sectoral influences seem unimportant for explaining coop failure. Supplementary analysis confirmed the irrelevance of sectoral influences by testing for differential effects of the Israeli state on coops in different sectors (there were none). The final form of state influence, predation, may have had some effect on the coops, as the British Mandate spent more on administration than the State of Israel and made some decisions in the interest of Britain rather than Palestine. Our data do not allow us to separate the effect of reduced predation from that of improved exchange regulation, but the relevant history suggests that the former effect is relatively minor. Although we are confident that exchange regulation is prominent in the effects of the State of Israel on the coops, other forms of state influence may be more important in other contexts.

On the issue of ideological interdependence, we argued first that organizations are infused with ideologies that define what outcomes are desirable and how they can best be achieved; and, second, in the pursuit of their ideologies, organizations are likely to harm those with different ideologies and help those with similar ideologies. These assertions are consistent with views on the operations of organizations formed explicitly to champion particular ideologies, so-called

social movement organizations (Zald and McCarthy, 1987). Studies of the interdependence of those organizations yield results that support ours: African American advocacy organizations positively affect Hispanic American organizations through direct cooperation and an overflow of legitimacy (Minkoff, 1995). The Women's Christian Temperance Union lobbied for prohibition legislation that harmed breweries, at least within the jurisdiction of the legislation (Wade, Swaminathan, and Saxon, 1998). Occasionally, ideology is used to explain the interaction of organizations that are formed out of an economic motivation but yet have an obvious ideological character, for instance, the battle between thrift organizations that represented differing concepts of mutualism (Haveman and Rao, 1997).

By analyzing the ideological competition and mutualism faced by a population of organizations that was primarily engaged in making products and providing services, we hope to extend to a wider set of organizations the argument that ideology influences organizational interdependence. We believe that ideology affects all organizations, that General Motors is no less ideological than the Women's Christian Temperance Union or Egged. The salience of ideologies is lower in countries like the United States, where organizations that make products and provide services are relatively homogenous in their commitment to capitalism's ideology. The difference in Israel is not that organizations there are more ideological but, rather, that there is more heterogeneity in the ideologies of interdependent organizations and that the effects of ideology are therefore easier to see. Even in the United States, however, it is possible to discern the unifying effect of capitalist ideology among major corporations (Neustadtl and Clawson, 1988). We advocate more attention to the ideological character of organizations as a means to develop a fuller understanding of the interdependencies of all types of organizations, not just those that explicitly pursue an ideological agenda. Such an approach is promising for describing not only the dynamics of organizational populations but also the dynamics of ideologies. Our results are consistent with the idea that the competition and mutualism of organizations contributed to an ideological shift in Israeli society.

Of course, the utility of this study depends on the validity of our interpretation of the analysis. Thus, it is worth summarizing how the many control variables in our models rule out alternative explanations for our main conclusions. We studied a long and tumultuous period, and there were many important changes in the environment of coops during this period. While a host of factors could account for an increased coop failure rate in the long, post-state period, we modeled all of the changes that we expected might affect coop failure: immigration, unemployment, national economic development, wars, competition and legitimacy in the coop population and its subpopulations, and the simple passage of time. Many of these factors are significant in our models, but their inclusion does not affect the results that are relevant to our hypotheses.

One alternative explanation is suggested by the abrupt rise, then fall in the coop population in the years immediately fol-

lowing establishment of the State of Israel, shown in figure 1 above. The marked growth in the coop population after the formation of the state is explained by the mass immigration and unemployment of that period (Russell, 1995). Coops that are founded for economic expediency in such conditions would not be expected to survive for long, and our models show that the failure rate is higher as a function of the level of immigration and unemployment when a coop is founded. Our models also show, consistent with ecological theory (Carroll and Hannan, 1989), that coops founded at a time of high density have a higher failure rate. So, while the wave of foundings is caused by the exogenous shock of immigration and unemployment, our models capture the fragility of the coops founded in that wave—we do not misattribute their failures to political or ideological causes.

Of greater concern than alternative explanations when applying our arguments to other contexts are the scope conditions. We have made predictions about how federations and the state affect an organizational population by supplying exchange-regulating institutions, but what causes a federation or state to be effective in doing so? We have suggested some of the features that may contribute to the capacity of a federation or state to provide order, but our treatment of the topic was necessarily incomplete. Likewise, we mentioned scope, scale, and the ability to coerce behavior legitimately as reasons for the expected competitive advantage of the state over a federation, but what other factors affect the relative power of the state over a federation? We point to differences and similarities between ideologies as causing ideological competition and mutualism between organizational populations, but when are ideologies different enough to evoke competition or similar enough to evoke mutualism? All these questions are challenges to future attempts to study the effect of politics and ideology on organizational populations. No single, context-bound study can resolve the issues of a theory's scope—for that, a systematic research program is required—but this study has shown that politics and ideology should no longer be ignored.

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APPENDIX: Baseline Model

The baseline model includes a large number of control variables that are not used to test our hypotheses but are necessary to a well-specified model of coop failure. We present the descriptions of the control variables, discussion of theories that lead to expectations about them, and results together. Table A.1 shows the results for the control variables.

Coop age. There has been an active debate regarding the age dependence of organizational failure. The most recent findings indicate that the risk of failure increases with age and that the cause appears to be the increasing obsolescence of organizations over time (Barron, West, and Hannan, 1994; Ranger-Moore, 1997). There are no indications of the significance of the age-range coefficients in table A.1 because age dependence in a piecewise-exponential model is indicated by differences in the magnitude of coefficients for adjacent age ranges, not by the significance of the coefficients. Chi-squared tests on model 3 indicate the following ordering of the magnitudes of the age coefficients: (0–2 years) < (2–5 years) < (5–10 years) = (10–20 years) = (20–30 years) < (30–40 years) < (40+ years). The resulting pattern, of a failure rate that increases with age but is flat in the middle of the age distribution, has been found in previous studies of organizational failure (Barron, West, and Hannan, 1994; Ingram and Inman, 1996).

Other coops absorbed. The risk of failure of an organization is typically found to decrease with its size (Baum, 1996), although for coops, many of the advantages of worker-ownership are diffused with the size of the organization (Perry, 1998). Our data do not include the number of participants, total assets, the volume of business, or other common measures of organizational size. We were able to construct a variable that is a count of the number of other coops that have been absorbed into the focal coop (an absorption takes place

when two coops merge, with one persisting and the other disappearing). Because internal growth is expensive for current members, when coops grow, it is often through absorptions of other coops. That was the pattern of growth for the largest Israeli coops, the bus coops Dan and Egged (five and eight absorptions, respectively). The number of absorptions can be expected to represent slack resources and whatever other positive characteristics allow one organization to absorb another. The absorptions coefficient is negative and bordering on significance ($p \approx .065$, one-tailed test).

Founding era. Stinchcombe (1965) argued that organizations are permanently imprinted by social and economic conditions at the time of their founding and that this imprinting affects their subsequent development and likelihood of survival. The most important social characteristic that might be imprinted on coops is the adherence in Israel to socialist ideology. It is generally accepted that adherence to socialist ideology in Israel has declined monotonically over the period we studied (Russell, 1995). Coops should be more robust if they are founded when adherence to socialist ideology is stronger, for two reasons. First, they will be more likely to receive the resources nec-

Table A.1

Control Variables for Piecewise Exponential Models of Israeli Workers' Cooperative Failure, 1920–1992*

Variable	Baseline	Model 1	Model 2	Model 3	Model 4
Age periods†					
0–2 years	–2.934	–3.397	–3.439	–3.755	–3.703
	(0.345)	(0.379)	(0.380)	(0.641)	(0.640)
2–5 years	0.053	–0.398	–0.428	–0.689	–0.641
	(0.303)	(0.342)	(0.343)	(0.613)	(0.613)
5–10 years	0.081	–0.235	–0.271	–0.473	–0.435
	(0.321)	(0.354)	(0.356)	(0.614)	(0.613)
10–20 years	–0.099	–0.258	–0.276	–0.537	–0.498
	(0.352)	(0.382)	(0.383)	(0.629)	(0.628)
20–30 years	–0.235	–0.244	–0.253	–0.461	–0.407
	(0.393)	(0.416)	(0.417)	(0.642)	(0.641)
30–40 years	0.199	0.296	0.251	0.105	0.144
	(0.447)	(0.465)	(0.466)	(0.673)	(0.672)
40+ years	0.698	0.922	0.917	0.781	0.822
	(0.501)	(0.517)	(0.519)	(0.701)	(0.700)
Other coops absorbed	–0.980•	–0.705	–0.694	–0.696	–0.711
	(0.509)	(0.459)	(0.456)	(0.459)	(0.466)
Founding era					
Post–1948	–0.758••	–0.096	–0.092	0.017	–0.002
	(0.255)	(0.265)	(0.266)	(0.269)	(0.270)
Post–1952	1.118••	0.993••	0.995••	0.921••	0.932••
	(0.224)	(0.216)	(0.216)	(0.218)	(0.218)
Post–1967	0.881••	0.956••	1.001••	1.075••	1.080••
	(0.195)	(0.195)	(0.196)	(0.2)	(0.200)
Post–1977	0.941••	0.871•	1.008••	1.071••	1.069••
	(0.364)	(0.360)	(0.361)	(0.37)	(0.370)
Founding conditions					
Immigrants / 1000	0.004••	0.002•	0.002•	0.002•	0.002•
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Unemployed / 1000	0.018••	0.020••	0.022••	0.022••	0.022••
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Location					
Tel Aviv	–0.284••	–0.304••	–0.292••	–0.286••	–0.283••
	(0.090)	(0.091)	(0.091)	(0.091)	(0.091)
Jerusalem	–0.073	–0.073	–0.056	–0.055	–0.050
	(0.116)	(0.117)	(0.118)	(0.117)	(0.117)
Haifa	–0.331••	–0.332••	–0.326••	–0.325••	–0.324••
	(0.106)	(0.107)	(0.107)	(0.107)	(0.107)
Other locations in center	–0.256•	–0.278••	–0.268•	–0.267•	–0.266•
	(0.107)	(0.107)	(0.107)	(0.107)	(0.107)
South	0.343•	0.309•	0.335•	0.334•	0.337•
	(0.147)	(0.147)	(0.148)	(0.148)	(0.148)
Religious affiliation	0.204	–0.563••	–0.563••	–0.559••	–0.556••
	(0.140)	(0.154)	(0.154)	(0.154)	(0.154)
Industry					
Personal transport	–0.570••	–0.580••	–0.585••	–0.581••	–0.582••
	(0.214)	(0.212)	(0.212)	(0.212)	(0.212)

Table A.1 *(Continued)*

Variable	Baseline	Model 1	Model 2	Model 3	Model 4
Motor freight	−0.927••	−0.707••	−0.692••	−0.687••	−0.682••
	(0.152)	(0.152)	(0.152)	(0.152)	(0.152)
Delivery	−0.896••	−0.854••	−0.862••	−0.869••	−0.872••
	(0.220)	(0.220)	(0.220)	(0.22)	(0.220)
Education	−0.547•	−0.552•	−0.574••	−0.566•	−0.569••
	(0.219)	(0.218)	(0.220)	(0.22)	(0.220)
Laundry	−0.611••	−0.514•	−0.505•	−0.509•	−0.501•
	(0.236)	(0.236)	(0.236)	(0.237)	(0.237)
Misc. production	0.376••	0.312•	0.329•	0.325•	0.330•
	(0.128)	(0.128)	(0.128)	(0.128)	(0.128)
Bakery	−0.788••	−0.640••	−0.641••	−0.646••	−0.650••
	(0.129)	(0.130)	(0.130)	(0.13)	(0.130)
Wood and carpentry	−0.353••	−0.256•	−0.265•	−0.260•	−0.257•
	(0.122)	(0.123)	(0.123)	(0.123)	(0.123)
Printing	−0.599••	−0.594•	−0.604••	−0.604••	−0.604••
	(0.152)	(0.152)	(0.152)	(0.152)	(0.152)
Macro-economic variables					
Gross domestic product	0.014•	0.008	0.003	0.001	0.004
	(0.007)	(0.007)	(0.007)	(0.01)	(0.010)
Unemployed / 1000	−0.003	−0.002	−0.002	0.002	0.001
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Calendar year	−0.073••	−0.058••	−0.059••	−0.04	−0.041
	(0.013)	(0.013)	(0.013)	(0.026)	(0.026)
Density dependence					
Local density	0.082••	0.060•	0.061•	0.060••	0.060•
	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)
(Local density)^2	−0.006••	−0.005••	−0.005••	−0.005••	−0.005••
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Density	0.006•	0.008••	0.009••	0.016••	0.016••
	(0.002)	(0.002)	(0.002)	(0.003)	(0.003)
(Density)^2/1000	−0.006•	−0.008••	−0.009••	−0.016••	−0.017••
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
Density at founding	0.002••	0.002••	0.002••	0.002••	0.002••
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)

• $p < .05$; •• $p < .01$.
* Standard errors are in parentheses.
† p-values are not shown for the coefficients of the age ranges, because those coefficients are not tested for significance.

essary for successful maturation if the ideology in the society in which they are founded is sympathetic to their organizational form. Second, they are more likely to have members committed to cooperative organization than are coops founded when socialist ideology is weak. So, coops founded in later, less socialist periods should have higher failure rates. We tested this idea by including four dichotomous variables that allowed us to classify each coop into one of five founding eras. We chose important dates in the ideological evolution of Israel to demarcate the founding eras: the founding of the state in 1948; the ideological upheaval in the labor movement around 1952; the Six-Day War in 1967; and the electoral victory of the Likud party in 1977. A coop that was founded in 1978 was coded as being post-1948, post-1952, post-1967, and post-1977. With this coding procedure, the coefficient for each era represents the difference in the failure rate for coops founded in that era compared with coops founded in the previous era (as opposed to an omitted category). Our argument that later founding brings higher failure predicts that all of the founding eras should have positive coefficients, which they do, except for post-1948. Coops founded in each era after 1952 have a higher failure rate than coops founded in previous eras. An alternative explanation for this result is Carroll and Teo's (1998) argument that organizations that precede institutional change (e.g., the founding of the state) will benefit more from that change.

Founding conditions. Russell (1995) argued that the founding of Israeli coops was sometimes out of economic expediency, allowing workers to create their own jobs in periods of high unemployment and immigration. Partici-

pants in coops founded out of expediency are less likely to be committed to cooperative ideals and more likely to pursue other employment opportunities when they are available. We included the number of immigrants and the number of unemployed persons in the year the coop was founded to test if coops founded in times of economic hardship were less robust. Consistent with that idea, both those variables had positive coefficients.

Location. Each coop was classified into one of six locations: Tel Aviv, Jerusalem, Haifa, the south, other locations in the north, and other locations in the center. These locations faced somewhat different economic, demographic, and social conditions that may have affected the failure rate. North is the omitted category in the statistical analysis. According to chi-squared tests done on model 3, the locations are ordered from lowest to highest failure rate as follows: Haifa = Tel Aviv = Center < Jerusalem = North < South.

Religious affiliation. The Histadrut was not the only federation coops were affiliated with. Sixty-five coops were affiliated with the religious Hapoel Hamizrachi movement. We included a dichotomous variable coded 1 if the coop was affiliated with Hapoel Hamizrachi to capture the possibility that affiliation with this federation generates some survival benefit, which it does, as indicated by the negative coefficient of Hapoel-Hamizrachi affiliation. The Hapoel Hamizrachi was not nearly as powerful a federation as the Histadrut and was not a threat to the state (supplementary analysis showed that the interaction between Israeli state and Hapoel Hamizrachi did not significantly affect coop failure). The coefficient for Merkaz affiliation is significantly smaller than the coefficient for Hapoel-Hamizrachi affiliation ($\chi^2 = 28.06$, 1 d.f., $p < .01$), so Merkaz affiliation provided a greater failure shield, which is what we would expect given the greater scale and power of the Histadrut.

Industry. We investigated the failure rates of 31 industries that the coops participated in, as well as the broad sectors of transportation, service, and manufacturing. The nine industries shown in table A.1 are the ones that had different failure rates than the 22 other industries. A negative coefficient for an industry indicates that coops in that industry were less likely to fail than coops in the 22 other industries. A full discussion of in which industries coops are more likely to thrive is beyond this paper, but most of the industries in which Israeli coops were more robust had been found elsewhere to be well suited to cooperative organization. Russell (1985) pointed out that coops solve agency problems in organizations in which participants are difficult to supervise by aligning members' and the organization's interest. This may explain the robustness of coops in personal transport, motor freight, delivery, and education. Coops have also been observed to be common in baking and printing (Russell, 1995).

Macro-economic variables. We controlled for the gross-domestic product (GDP) and the number unemployed to capture the macro-economic health in a given year. While a strong economy typically reduces organizational failure, workers' cooperatives are argued to respond counter-cyclically to the economy (Russell, 1995). We also included the calendar year to capture trends over time that are not captured by our other variables. In model 3, none of the macro-economic variables were significant.

Density dependence. Density is the number of organizations in a population. The accepted argument, supported by many empirical studies, is that density brings two opposing effects, legitimacy and competition, which result in a nonmonotonic effect on failure (Baum, 1996). For Israeli coops, the application of the traditional density dependence argument is questionable. Coop density is a poor measure for most types of competition because coops operated in many industries, were spread throughout the country, and faced significant competition from non-coop organizations. Further, the number of coops may poorly reflect legitimacy, which was strongly influenced by conditions in the countries from which Jews immigrated to Palestine and Israel. In response to these complexities, we used local and nonlocal measures of density (Hannan et al., 1995). Local density is the number of other coops in the focal coop's geographic region and industry. Nonlocal density is the total number of other coops, exclusive of local density. We included second-order terms for both density measures.

Both density measures had positive first-order and negative second-order effects, indicating inverted-U-shaped effects on coop failure. For both local and nonlocal density, however, the maximum of the nonmonotonic effect falls outside of the range of the variable. So, the failure rate of coops increases monotonically as a function of local density and nonlocal density. We investigated different operationalizations of density, including density of

coops in the focal coop's industry and geographic region. All of these specifications gave us the same pattern of density dependence. We also explored an interaction between density and year, which Baum (1995) argued will reflect different implications of low density in populations that experience a peak and subsequent decline in density. Including that interaction did not affect the basic effect of density, and the coefficient of the interaction variable was not significant. We are left to conclude that the coops have an unusual pattern of density dependence. Although Russell (1995) found density effects on the founding rate of Israeli worker coops that were consistent with the theory of density dependence, other analyses of the founding and failure of cooperatives have provided results that do not fit that theory (Staber, 1989, 1992; Teo et al., 1997).

The final density variable, density at founding, has been argued to reflect the availability of resources and competitive space at the time of founding (Carroll and Hannan, 1989). Organizations founded in dense environments will be forced into unattractive niches and lack the resources necessary for effective maturation. That should result in a positive effect of density at founding on the failure rate, as found in our models.