Sustainable Well-Being in Israel

Report of the Expert Committee of The Israel Academy of Sciences and Humanities

Building Social Capital for Sustainable Well-Being in Israel: A Scientific Review

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1

Introduction

Humans are social beings, whose well-being depends on their ability to interact and act collectively, to create shared identities and to come to each other's support in times of need. From an early age, we look to those closest to us for material aid and emotional support, and we also adopt from them basic values of right and wrong. We are raised into communities, and from these communities we adopt norms and implicit behavioral rules, such as how to act in public.

As life progresses, we make new friends and acquaintances, through whom we build our identity and acquire information about jobs, schools, and other opportunities. Along this life trajectory, we find the time and resources to reciprocate by helping others – friends, family members, and sometimes complete strangers. These essential traits of human life are made possible only through interpersonal connections. While they may benefit us personally, they also require us to see past our own selves, acknowledge the value of belonging, and trust that others see us in a similar way.

The concept of *social capital* is a multi-dimensional term referring to all the resources that help individuals build social abilities and power. Social capital binds together the intangible resources that are accumulated and sustained through human relations, and the modes of cooperation and engagement that arise from these resources. Networks of acquaintance and belonging, and the norms of trust and reciprocity that are shared by their members, are accepted across different theoretical schools as a fundamental component of social capital.

While the concept of social capital may evoke age-old notions such as "it is

not good for a person to be alone" (לא טוב היות האדם לבדו) and "do unto others as you would have others do unto you," it is also novel in that it evaluates how social behavior contributes to personal and collective advancement. Accordingly, the theory of social capital aims to define (1) what *comprises these intangible resources*, (2) what the *connections and relationships* between these resources are, and (3) how these resources *affect* the well-being of individuals, communities and societies (Halpern, 2005).

Social capital theory thus acknowledges that human advancement rests not only on "classical" economic and human resources, but also on the social context within which they are produced (Knack & Keefer, 1997). For example, our professional advancement depends both upon an adequate level of education (*what* you know) and upon having a network of people to inform us of new opportunities and provide potential employers with recommendations (*whom* you know) (Woolcock & Narayan, 2000). This is also true on a larger scale: The *growth* of communities and democratic nations is based on material resources, but only when people trust each other and share a sense of belonging can this *growth* turn into an individual and collective sense of *well-being* (Forrest & Kearns, 2001; Helliwell & Putnam, 2004; Putnam, 2000).

Recognition of the value of these social networks, and the painful prices of their absence, have come to global attention during the Covid-19 pandemic. Management of the crisis has relied not only on medical expertise, but also on trust (in other people and in the authorities), reciprocal behavior, and networks of support. The physical restrictions have also highlighted the value of social life and our need to feel connected to our peers (Kahn & Costa, 2020).[1] For example, at the height of the first wave of the pandemic, a study in several European countries found that one standard deviation increase in social capital in a given area led to significantly fewer cumulative Covid-19 cases per capita (Bartscher et al., 2020). While we do not directly address the pandemic and its implications in this review, we hope the following conceptualization will resonate more deeply with our readers at this historical time.

1 See also "Why social capital is essential in the fight against COVID-19"; "COVID-19: Leveraging on social capital to 'Flatten the Curve' in Eritrea".

A

Methodology and Structure of the Review

The goal of this review is to present a framework for defining critical social capital resources that relate directly to the well-being of individuals and communities in Israel. The order of the chapters reflects the methodology employed by the authors:

Step 1: An extensive review of the literature was conducted, to identify the components included in the major theoretical models of social capital.

Step 2: Measures of social capital (existing survey questions and proxy measures) were reviewed and compiled into an index of social capital indicators.

Step 3: Four primary universal sets of critical resources (network, cognitive, collective and institutional) were identified, each with its respective benefits and measurements.

Step 4: Five critical challenges that Israeli society is expected to face in the coming years were identified.

Step 5: The universal critical resources identified in Step 3 were set against the context-specific challenges identified in Step 4 to present a set of critical components tailored to the sustainable well-being of Israeli society. The preliminary outcomes of this step are presented in Appendix 2.

Figure 1. The Methodological Process of Defining Critical Social Capital Resources for Israel

1	2	3	4	5
Theoretical review	Review of well-being indexes	Critical universal resources of social capital	Israel-specific challenges	Critical resources for sustainable well-being in Israel

2

Social Capital: A Variety of Theoretical Lenses

This chapter presents the principal theoretical conceptualizations of social capital. First, we present the origins of the concept. Then we turn to a discussion of Robert Putnam's work, focusing on his concepts of bonding and bridging social capital, critiques and expansions of his conceptualizations, and a brief review of the negative aspects of social capital. The third subsection draws upon the literature to propose four core components of social capital: structural-network components, structural collective-associational components, cognitive components, and macro-scale components. Finally, the relations between social capital and other forms of capital are briefly reviewed.

A

Early Definitions

While notions similar to that of social capital have appeared since the days of de Tocqueville and Durkheim (Halpern, 2005), the advent of a cohesive Social Capital Theory is usually attributed to the works of sociologists Pierre Bourdieu and James Coleman.

In Bourdieu's critical perspective, social capital is a network resource – one of several forms of capital (the others being economic, cultural, and symbolic capital) – that individuals can accumulate and utilize to advance their social

position. Social capital, in his words, is:

> the aggregate of the actual or potential resources which are linked to [...] membership in a group – which provides each of its members with the backing of the collectivity-owned capital, a "credential" which entitles them to credit, in the various senses of the word (Bourdieu, 1986, pp. 248-249).

Bourdieu emphasizes two elements in this definition: (1) social capital is inherently linked to *social structures*, meaning that it can only be accumulated and valuated within a given social context; and (2) the benefits of social capital accrue to individuals and not to the group at large.

Coleman (1988), like Bourdieu, defines social capital as existing "in the *relations* among persons" (p. 100). The relational nature of social capital distinguishes it from physical capital, which is embodied in material goods, and human capital, which is embodied in individual skills and learning capacities. Coleman further argues that social structures can accumulate social capital only insofar as they serve a function, such as facilitating transactions or providing support to their members. He identifies different expressions of social capital, including: *shared obligations and expectations* that allow members to build a reputation of trustworthiness, *information channels*, and *norms and sanctions* that maintain the integrity of the social structure. Ultimately, Coleman argues that the presence or absence of social capital will determine an individual's opportunities to accumulate human and material capital during childhood and beyond. In proposing such connecting hypotheses between types of capital, Coleman laid the ground for an empirical exploration of the relationship between social capital and other forms of capital.

Why Create a "Social" Category of Capital?

Bourdieu's and Coleman's canonical foundations were later widely debated, yet they demonstrate the motivations and justifications for creating a "social" category of capital. Both authors were motivated by a desire to bridge the gap

between economic and sociological approaches and to demonstrate the value of *collective action* in favor of others. In rational-choice economic models, the rationality of human behavior is assumed to be mainly self-serving and profit-maximizing. Collective action is understood in this economic context as a purely instrumental choice that would only be pursued if expected to yield returns to the individual (Paldam & Svendsen, 2000).

In social capital theory, the formation of societies and institutions is tied to concepts of trust, values, reciprocity, and group solidarity (Woolcock, 1998). Goodwill, credibility, and cooperative behavior, it is argued, are no less rational than economic rational choices (Paldam & Svendsen, 2000). Like human capital, social capital has "an intrinsic value as well as an instrumental value" (Woolcock, 1998, p. 192), since it both contributes to satisfaction from community life and creates economic and functional payoffs. Human individuals' ostensibly inherent egoism, as perceived in behavioral economy, was further refuted in experiments that demonstrated the evolutionary value of cooperation and collective action (Ostrom, 2000). Social capital theory was recruited to find common ground: "to import the economists' principle of rational action [...] and to do so without discarding social organization in the process" (Coleman, 1988, p. S97).

The use of the term "capital" is further justified on the basis of the similarity in the mechanisms of markets and social structures (Van Der Gaag, 2005): The market functions of debt and investment parallel the "credit" accrued in social relations, in the form of obligations and expectations (also Coleman, 1988). In a functioning social system, people invest time and resources in socializing and helping others, without expectations of an immediate repayment or an exact interest rate. Instead, they place their trust in the norm of reciprocity existing in a social network: When the same people require aid for themselves, they expect to receive it from within the same social network. The "amount" of social capital accumulated and created in a social structure is therefore a function of members' levels of trustworthiness and their volume of shared obligations ("credit slips," as Coleman refers to them).

Both Coleman and Bourdieu agree and emphasize that social capital is *unevenly*

distributed and reproduces social and economic inequalities (Briggs, 2003; Edwards & Foley, 1998). Other theorists agree that levels of social capital differ between places and communities and that this difference may aggravate socio-economic inequalities (DiMaggio & Garip, 2012; Lin, 2001). Thus, the relationship between social capital and economic mobility has become central to the translation of social capital from theory into policy: If the two forms of capital (economic and social) are also causally related, perhaps an investment in social capital can contribute to economic mobility? And if so, do similar relations exist on regional and national scales? As we discuss in Section 2B, Robert Putnam's approach to social capital addresses this question.

Limitations to The Conceptualization of Social Relations as Capital

The conceptualization of social relations as capital has some limitations. First, the mechanisms of social capital accumulation are different from those of other forms of capital, because the "withdrawal" and "accumulation" of social capital are often one and the same. Activities such as socializing and community volunteering are supposedly utilitarian and extract social resources, but they simultaneously reinforce those same resources (Katz, 2000). Accordingly, it is difficult to define exactly how social capital is "produced" and where this production takes place (Paldam & Svendsen, 2000). Second, social capital theory is complicated by the fuzzy boundaries between resources, actors, and actions – a fuzziness for which the "Putnam school," in particular, came in for critique (Edwards & Foley, 1998; Fine, 2010). Components such as communities, collective action, trust, and a sense of belonging (to name just a few) may be defined interchangeably as inputs, stocks, or outputs (Harpham, 2008). Bearing these critiques in mind, we carefully embrace the concept of social capital for its acknowledgment that communities and individuals can indeed invest resources in social structures to promote their own well-being.

B

The "Putnam School" of Social Capital and Its Derivatives

If *social capital* has been turned from an academic concept into a popular buzzword and a widely accepted policy tool, this can be attributed primarily to the work of Robert Putnam. After studying the components of social capital in Italian (Putnam, 1993) and American communities (Putnam, 2000), Putnam provocatively concluded that Americans in the early millennial years were "bowling alone," and that the American nation was in the midst of a steep decline in membership in voluntary associations. His methods and conclusions have sparked considerable public attention (and debate).

Meso-Level Associational Social Capital

In defining social capital as "connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam 2000, p. 19), Putnam was surely inspired by his predecessors, but his conceptualization is fundamentally different in the scale of its analysis. Where Coleman and Bourdieu examine social capital on a *micro* level, as comprising resources available to individuals, Putnam offers a "communitarian" approach that sees social capital functioning on a *meso* level, as a feature of social groups and communities, and on a *macro* level, as a feature of regions and (democratic) nations (also: Halpern, 2005; Moore et al., 2005).

According to Putnam, social capital is formed through *engagement in voluntary associations*, such as neighborhood committees, religious groups, and community-based volunteering (Beyerlein & Hipp, 2006; Putnam, 1993). These "horizontal," non-hierarchical grassroots civic associations act as "schools of democracy" in which people learn to cooperate and communicate. People's engagement and investments in such associations create social capital in the form of trust and norms of reciprocity, "positive externalities" that spill over

to all members of the community, positively affecting not only the group members but also markets and society as a whole (Häuberer, 2011; Portes, 2000; Putnam & Goss, 2002). As Putnam (1993, p. 89) writes, associations "instill in their members habits of economic cooperation, solidarity, and public spiritedness." For Putnam, the key output of social capital is a functioning democracy. Accordingly, the meso scale of social capital is also linked to macro-scale effects, particularly social resilience and the social cohesiveness, tolerance, sustainability, and well-being of nations (Aldrich & Meyer, 2015; Grootaert, Narayan, Jones & Woolcock, 2004; Halpern, 2005).

Bridging and Bonding Social Capital

A second contribution by Putnam is the distinction between two types of social capital, bonding and bridging, each pertaining to a different set of relations and effects. *Bonding* social capital refers to generally homogeneous "inward-looking" networks revolving around a shared identity and other cultural attributes, such as extended families, traditional rural communities, and immigrant communities in cities, all of which provide immediate social support to their members. *Bridging* social capital refers to "outward-looking" connections between dissimilar groups or heterogeneous people, allowing them to traverse social (ethnic, racial) divides and access resources outside their immediate social circles. Bridging social capital, though it is difficult to create and can deteriorate fast if not actively maintained (Halpern, 2005), is viewed positively for its role in reducing isolation and prejudice and expanding feelings of belonging. It is associated with the concept of "weak ties" (Burt, 2004; Granovetter, 1973), connections that are not maintained regularly but provide access to resources that are available in distant or dissimilar networks.

Criticisms, Extensions, and Limitations of the Putnam School

The use of a meso-level definition of social capital (civic engagement, or "civic-ness") was criticized for blurring the distinction between inputs and

effects, or between social and cultural capital (Häuberer, 2011; Portes, 1998, 2000). Researchers have warned that the emphasis on civic engagement and democracy should not lead to underestimating the value of immediate individual-level networks (Edwards & Foley, 1998; Patulny & Svendsen, 2007), particularly in cases of extreme hardship or crisis (Aldrich, 2011). Empirical analyses have also suggested that the benefits of civic engagement are in fact a result of underplayed systemic factors such as social inequality (stemming from material capital inequalities) and levels of education (Defilippis, 2001; Ferragina & Arrigoni, 2017; Fine, 2010; Moore et al., 2005; Portes & Vickstrom, 2011). Edwards and Foley (1998) argue that the meaning and motivations of civic activity are highly contextual and are not necessarily discernible from state or market functions.

While the bonding/bridging typology has a heuristic value, it also has limitations and multiple extensions. All these theoretical developments criticize the dichotomy of the typology and suggest blurring the distinction between weak and strong ties. First, Putnam's bridging social capital ignores the structural forces embedded in social relations, which create power imbalances and serve as mechanisms for exclusion, inequality, and contestation between actors (Emirbayer & Johnson, 2008). Thus, an extension to Putnam's bridging social capital is found in Woolcock's (1998) idea of *linking* social capital, which focuses on a "vertical bridge" between groups with unequal power and resources. While bridging social capital generally involves equals from different groups, linking social capital involves ties that straddle power strata, such as individuals/nonprofits linking with macro-level institutions (government, police) to garner the resources they need (Szreter & Woolcock, 2004).

Second, later explorations of Putnam's model have blurred and problematized the dichotomy of bonding and bridging capital, showing instead that social ties can show *some* traits from both the weak and the strong ends of the binary. Social ties may be "compartmentalized" (Small, 2009) in a specific context and never materialize into real strong relations. They may also be "elastic," providing intensive emotional support without being perceived as too intrusive (Torres, 2019); or they may be "disposable" if access and opportunities for

connectivity are not formally provided (Desmond, 2012; see Offer, 2012 for a review). The distinction between weak and strong ties – and consequently between bridging and bonding social capital – has been further blurred by online networking and other technological changes that facilitate intimate and frequent relations between relatively distant acquaintances (Ellison, Steinfield, & Lampe, 2011; Lentz, 2011; Mou & Lin, 2017). Finally, while Putnam associates the negative elements of social capital primarily with the restrictions of bonding social networks, associational activity can also lead to negative consequences, as we discuss later.

The "Dark Side" of Social Capital

The benefits of social capital do not come without a price. First, as already acknowledged by Putnam (2000), the self-selecting nature of bonding social capital, if it is not balanced by the openness of bridging social capital, may harm communities by promoting exclusion, corruption, and bigotry. Uslaner (2009) labelled this "the inequality trap." The Mafia and the Ku Klux Klan are extreme examples of tight-knit groups that, with their high in-group bonding social capital, are damaging to the broader society (Putnam, 2000). Other possible negative effects of social capital exist within traditional communities with strong bonding capital, such as the Haredi/ultra-Orthodox community or the kibbutz. Excessive bonding social capital may harm or limit individuals, if the bonds are so tight that conformity and tradition hijack innovation, if solidarity rewards free-riding community members, or if norms of corruption develop (Graeff, 2009; Portes, 1998; Reynolds, 2013). In times of crisis or post-disaster recovery, such communities might resist aid or withhold resources from other affected communities (Aldrich & Meyer, 2015).

Second, "the homophily problem" (Briggs, 2003) suggests that social capital in multicultural societies and communities will tend to accumulate within homogeneous groups united by race, ethnicity, language, etc., thus intensifying alienation between the groups. Homophily, as Putnam (2007) acknowledges, may be detrimental to diverse societies; or, as Putnam and Goss (2002, p. 12) bluntly

argue, "bonding without bridging equals Bosnia." Indeed, comparative studies have found a negative correlation between ethnic diversity and generalized trust (Hooghe, Reeskens, Stolle, & Trappers, 2009; Putnam, 2007; Stolle, Soroka, & Johnston, 2008). Recently, gerontological studies have highlighted the ambivalence of social support for older people, showing that supportive relations may also lead to negative health and welfare outcomes (H. J. Lee & Szinovacz, 2016).

Third, the advent of technology and online social networking has its own dark sides. Early in the days of online communication, social capital theorists warned that the "global village" may replace face-to-face social engagements and enhance the negative effects of bonding capital by encouraging connections only with like-minded people (Wellman, Quan Haase, Witte, & Hampton, 2001). Similarly, a recent cross-national study has found that dissemination of hate content is negatively associated with offline social capital, but positively correlated with online social capital, suggesting that online communities can encourage the negative aspects of social capital (Kaakinen et al., 2018).

C

Components of Social Capital

In presenting the main building blocks of social capital, the theoretical literature tends to distinguish between its *structural*, *cognitive,* and *macro-level* components. The structural components include networks, featured in sociological models, and collective engagement in civic groups and associations, featured in political science models. The cognitive or cultural components include subjective elements — norms, values, and beliefs (the "norms of reciprocity") — and the perceptions of trust ("generalized" and "particularized") that motivate people to act in a non-egoistic manner that promotes social solidarity. Finally, macro-level components serve as a proxy for subjective measures of the well-being of democratic societies.

Structural Network Components

The "network approach" views networks as the primary structural component of social capital. Networks, defined as the interpersonal relationships and connections that create and sustain social capital (Häuberer, 2011; Lin, 2001), facilitate the flow of information, provide access to resources, disseminate norms, and guarantee their enforcement (Adler & Kwon, 2002; Coleman, 1988).[2] Two features of networks are involved in generating social capital: (1) quantifiable opportunities, that is, *the volume* and *density of connections between members*; and (2) the members' varying levels of competencies and capacities, that is, *the ability of network members* (Adler & Kwon, 2002). Social capital has also been identified with *sparse* network connections, since individuals benefit from acting as exclusive connectors within a network (Burt, 2004).

The concepts of bonding, bridging, and linking social capital are based on the network approach. *Bonding social capital* emerges from immediate family and community links that provide social support in times of need (Aldrich & Meyer, 2015). The critical measure of bonding social capital is the *level of social support*, such as the number of close friends or relatives that a respondent can turn to in times of need. *Bridging social capital* emerges from "cross-cutting" connections between people of different ethnic, religious, or income backgrounds (Villalonga-Olives & Kawachi, 2015). Connections to people in influential positions, such as decision-makers, academics, and professionals, are crucial for building *linking social capital* across social strata and vertical/hierarchical power differences (Briggs, 1998; Van Der Gaag & Snijders, 2005).

Additional conceptualizations that incorporate power differentials into social capital theory include Briggs's (2003) notion of "cross-cutting" relations, the notion of social embeddedness (Woolcock & Narayan, 2000), and the "Resource Generator" (Van Der Gaag & Snijders, 2005), which explores these issues from a social network perspective. In what follows, we take power differences into account in analyzing survey data with respect to each category of social capital

2 Adler and Kwon (2002, p. 23) define social capital as "the goodwill available to individuals or groups. Its source lies in the structure and content of the actor's social relations. Its effects *flow* from the information, influence, and solidarity it makes available to the actor."

components: structural-network, structural-collective (see below), cognitive, and macro-scale.

Collective-Associational Components

The collective-associational element of structural social capital rests on Putnam's (2000) view of social capital as an asset of communities. According to this view, membership and engagement in formal and informal "horizontal" civic associations ("civic activity") are tangible manifestations of social capital, in that these represent the members' collective commitment to the shared norms of a community, and their willingness to invest in that community (Hooghe & Stolle, 2003; Paldam & Svendsen, 2000).[3] Associations contribute a collective resource that reflects the potential of a community to act toward a shared goal, a feature defined by Robert Sampson (2012) as collective efficacy. They also provide key benefits ("externalities") to the community in which they operate, such as the negative correlation that Sampson found between efficacy and crime. Finally, civil society has been linked to various positive outcomes on a macro scale (Woolcock, 2011). Putnam (2000) argues that an observed decline in civic participation was caused by rising workforce participation, suburbanization, more time spent on TV and media consumption, and generational change.

Each cultural-political setting requires its own classification of the civic activities and associations that are considered to generate social capital.[4] The value of each civic activity — whether material (e.g., through financial donations) or in-kind (e.g., through volunteering) — to social capital thus is context-specific (Dunbar, 2020), and it can be seen as an aspect both of individual behavior (expressing belief in the community's ability to act collectively) and of a community's "organizational density" (the volume of activities in its organizations).

3 Although Putnam originally favored organizations that promote "bridging" connections between groups and communities, in-group "bonding" organizations are also valuable, mainly for building local cohesion and resilience (Hooghe & Stolle, 2003).

4 For example, Knack and Keefer (1997) distinguish between rent-seeking associations, which may promote only the social capital of their own members, and community-oriented organizations, which promote cooperation toward a common localized goal.

Cognitive Components

The cognitive components of social capital refer to the perceptions that infuse social connections with a shared meaning. The distinctive factor of these components is their subjective and intangible nature (Edwards & Foley, 1998). Cognitive components can be divided into two focal categories: (1) shared *values and norms of reciprocity*; and (2) *perceptions of trust* (Van Deth, 2003). These two elements are crucial to the ability of individuals to cooperate toward a collective goal, and they provide the foundations of *community social cohesion* (Forrest & Kearns, 2001; Fukuyama, 1995).

Norms of reciprocity: Norms are implicit rules of behavior that reflect the shared values of a community or society (in contrast to formal laws). People adhere to their communities' norms because of: (1) the sense of obligation created by their feeling of a shared fate; and (2) the instrumental incentive created by their expectation of reciprocity (Portes, 1998). When such norms are shared and reciprocated by many, the behavior of strangers becomes more predictable, generating a sense of trust (Fukuyama, 1995). Adherence is further regulated by sanctions inflicted by the community in response to deviations (Ostrom & Ahn, 2009).

Generalized and particularized trust: Trust, a personality trait determined early in life, is arguably the most prominent subjective measure of social capital (Fukuyama, 1995; Hooghe, 2007; Uslaner, 2002). Trusting individuals are inclined to share information, reciprocate, lend help, and extend resources to people they deem trustworthy, and to invest less in protecting themselves and their transactions; that is to say, they are more inclined to expose themselves to vulnerability. On a macro (national) scale, generalized trust and norms of civic cooperation are positively correlated with human capital attainment and economic growth (Knack & Keefer, 1997).

In understanding the role of trust in building social capital, it is helpful to distinguish between *particularized trust* and *generalized trust* (Uslaner, 2002). *Particularized trust* rests on prior acquaintance and is based on well established rules and norms of reciprocity, ingrained in tradition and known to all members

of a group (Svendsen & Svendsen, 2009). In its extreme form, it is placed only in immediate family members and friends (Banfield, 1958).

Generalized trust, on the other hand, is founded on a "moral commandment to treat people *as if* they were trustworthy." According to Uslaner (2002), this weaker and more abstract type of "optimistic" trust is a precondition for civic engagement and building ties between previously unconnected individuals. Generalized trust is thus associated with the notion of bridging social capital (Rothstein & Uslaner, 2005), which rests on people's willingness to extend their goodwill beyond their circles of intimate acquaintance (Kwon & Adler, 2014; Uslaner, 2002). This leap in trust is easier in homogeneous societies, while diverse societies usually have lower rates of generalized trust (Hooghe, 2007; Putnam, 2007).

Collective action can enforce behavior that adheres to social norms (Coleman, 1988; Paldam & Svendsen, 2000; Woolcock, 2010). "Enforceable trust," or the communally enforced requirement to act in a trustworthy way, is a fundamental source of social capital (Portes, 1998). The effect of enforcement has been demonstrated, for example, in the tight-knit Asian immigrant communities to be found in the US, which act collectively to enforce school attendance among the community's youth, leading to increased human capital (Beyerlein & Hipp, 2006; Portes, 1998). Religious attendance also contributes to social capital and social engagement through solidarity as well as enforcement (Dunbar, 2020). Sampson's (2012) concept of collective efficacy also includes elements of self-enforcement, particularly in terms of childcare and public order. Community enforcement and sanctioning ("shaming") can also dissuade individuals from damaging behaviors, such as smoking (DiMaggio & Garip, 2012; Kawachi et al., 2008).

Self-enforcement of norms may serve as an alternative to official top-down enforcement, but it may also be diminished by official enforcement, if it contradicts rules and laws. The Soviet regime is often presented as a cautionary tale of external enforcement destroying trust-based social capital and inhibiting its reformation (Uslaner, 2009). By introducing top-down "voluntary" associations (such as the Komsomol youth organization) in lieu of

community-based organizations, the Soviets perpetrated a culture of fear of secret police and informants, leading to the decimation of interpersonal trust. In the decades after the collapse of the Eastern Bloc, as the post-Soviet states sought to rebuild their economies, social capital was slow to recover (Knack & Keefer, 1997; Paldam & Svendsen, 2000).

Macro-Scale Components

The *macro-scale* component links social capital to democracy, in that macro-scale social capital upholds the democratic functioning of regions and nations (Van Deth, 2003; Warren, 2011). High levels of civic engagement create the infrastructure for democratic societies and serve as a proxy for macro-scale social capital (Putnam, 1993; Warren, 2011). The large-scale effects of social capital can be inferred by aggregating the components of smaller-scale *secondary data* or by analyzing *big data*.

Secondary data may include two common macro-scale expressions of civic behavior in democratic societies: *citizen participation in voting* (voter turnout) and *corruption rates* (Svendsen & Svendsen, 2009). *Network density of civic associations* is another proxy used for assessing the social capital of regions with better functioning governments and economies (Putnam, 1993). *Bridging social capital* as a feature of firms and communities, and *governance* as a feature of states, have also been used as proxy measures for macro-scale social capital. In functioning democratic states, these measures may positively interact and complement each other, while under dysfunctional governments, they may substitute for one another (Woolcock & Narayan, 2000).

The potential for bridging social capital can be inferred from measures of *inequality*, *social mobility,* and *segregation* in society. Although the relationship between social capital and diversity is complicated and often inverse (Putnam, 2007; Stolle et al., 2008), diversity is nevertheless crucial to understanding macro-scale social capital, because it creates the potential for bridging interactions. Finally, as civic and social engagement are increasingly happening online, *digital proficiency* has also been used as a proxy measure for online

macro-scale social capital in a society (Barbosa Neves, Fonseca, Amaro & Pasqualotti, 2018).

The term *big data* refers to new forms of large-scale digital data that allow computational and statistical claims to be made about large social questions within a rich theoretical framework (Halford & Savage, 2017). The introduction of big data research into the social sciences has potential implications for social capital measurement (Gandomi & Haider, 2015).

For example, geographical big data (Glaeser et al., 2018) from mobile devices has enabled a "real-time analysis of city life" (Kitchin, 2014), by measuring quality of life, social connections and leisure activities in relation to urban spatial variables. Likewise, big data from social media platforms has allowed regional analyses of the connection between structural social capital and economic performance (Norbutas & Corten, 2018, using the Dutch social network *Hyves*, with +10m users) and between structural social capital and corruption (Wachs et al., 2019, using the Hungarian social network iWiW with +3.5m users). However, attempts to predict well-being from big data sources, in the context of the world happiness report, have produced modest results (Bellet & Frijters, 2019). Big data has also attracted criticism for its various biases (Hargittai, 2020).[5] In sum, big data analysis has not yet been systematically employed in social capital research, but it has the potential to continue the path of germinal works on social capital that rely on large-scale aggregate data, such as Putnam's *Bowling Alone* and Sampson's *Great American City*.

We return to these categorizations in Section 4, to define the methods used for their measurement and the level of criticality of each component for social capital.

5 Digital social capital has also been explored on a smaller scale, as explained in section 4A (Ahn, 2012; Ellison et al., 2011).

D

Relations Between Social Capital and Other Forms of Capital

Social capital and its components interact with the other forms of capital – human, economic, cultural, and natural. Indeed, social capital has been described as "the missing link" (Grootaert, 2001) between the various forms of capital. Below, we highlight key interactions, both positive and negative. **Figure 2** provides a summary of these interactions.

Human capital: Relational networks and "weak ties" are instrumental in the development of individual human capital (Briggs, 1998; Coleman, 1988; Granovetter, 1973; Kawachi et al., 2008; Szreter & Woolcock, 2004). In organizational contexts, many outcomes related to human capital – such as recruitment, teamwork, and employee satisfaction – are dependent on relational networks among workers and employees (Borgatti & Li, 2009; Eisenberger, Stinglhamber, Vandenberghe, Sucharski & Rhoades, 2002; Hollenbeck & Jamieson, 2015). For example, weak ties, particularly across social divides, were found to be crucial to accessing jobs and other professional opportunities in the Haredi population in Israel (Malchi, 2016).

In the social context, networks of social support with multiple caring adults and sources of information positively affect the education attainment of children, reduce youth delinquency (Coleman, 1988; Reynolds, 2013), and help in coping with poverty in urban neighborhoods (Rakodi & Lloyd-Jones, 2002). Perhaps the clearest connection to human capital is in relation to health, and specifically to self-reported health levels (Kawachi et al., 2008). The effects are far-reaching: A meta-analysis has found health to be positively correlated with most components of social capital, including participation in community life, sense of community, networks of support, generalized trust, and bonding and bridging social capital (Gilbert, Quinn, Goodman, Butler & Wallace, 2013).

The relationships also hold in the opposite direction: Human capital contributes

to the formation of social capital. Notably, digital proficiency is an increasingly important asset for participation in the civic arena (Barbosa Neves et al., 2018; Ellison, Lampe & Steinfield, 2010).

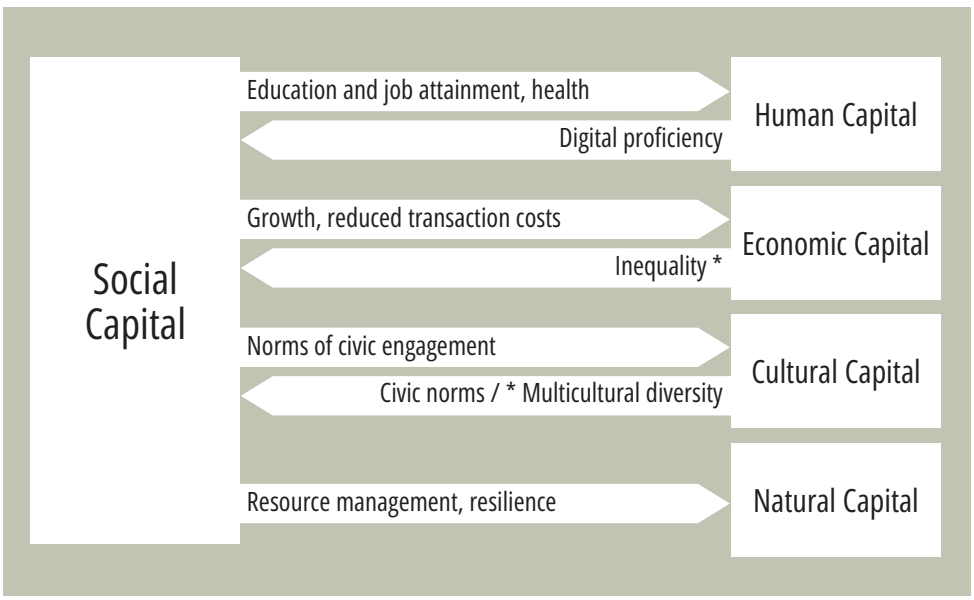
Economic capital: On the one hand, economic capital contributes to social capital, insofar as it is distributed equitably. Inequality is negatively correlated with macro measures of social capital, and, conversely, egalitarian societies have consistently higher levels of generalized trust (Knack & Keefer, 1997; Uslaner, 2009). Social capital can gain from investments in infrastructure such as that needed for mobility and communication, which increase connections between people (Magdol & Bessel, 2003).

On the other hand, social capital has been associated with economic gains for individuals and countries (Lin, 2001; Portes, 1998; Westlund & Adam, 2010). Cognitive components of social capital, such as generalized trust in others, may reduce transaction costs, encourage innovation (Lundvall, 1992), and contribute to economic growth. Yet, empirical findings in one study suggested that ultra-Orthodox female micro-entrepreneurs in Israel hardly utilized their far-reaching social networks in promoting their micro-businesses, hindering economic gains (Monnickendam-Givon, Schwartz, & Gidron, 2016). Social capital may also have an indirect effect on economic development, through its contribution to the formation of human capital.

Cultural capital: The causal relationship between cultural and social elements of capital, as well as the distinction between the two, are a matter of longstanding debate (Edwards & Foley, 1998). Depending on the theoretical perspective, participation in voluntary associations and civic life may be viewed either as a result of a culture of "civicness" in a society or as its driver, but, either way, the relationship stands. A wider consensus exists around the *negative* relationship between cultural diversity and social capital: At any scale, diverse communities suffer from lower social capital (Putnam, 2007). Trust-building efforts and the promotion of shared civic norms and cross-cutting multiethnic networks thus are essential to overcoming the negative effect of diversity on social capital (Greenspan, 2014).

Natural capital: Ostrom and Ahn (2009) argue that high levels of social capital and community cohesion contribute to the effective and equitable management of natural resources, as these provide a framework for collective action and help to overcome problems associated with the allocation of public goods (the "free rider problem"). A shared commitment to the management of natural assets on a local scale can contribute to natural capital on a national scale, and effective civic infrastructure is crucial for addressing natural hazards (Aldrich, 2011; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008). Namely, the involvement of NGOs increases the effectiveness of participatory environmental processes (Greenspan, Cohen-Blankshtain, & Geva, forthcoming). Finally, the sustainability approach to well-being highlights how social structures and capital contribute to setting and assessing sustainable development objectives (Dale & Newman, 2010; Rydin & Holman, 2004). This approach has largely been accepted by international organizations as complementing top-down approaches to environmental action (Boyer, Peterson, Arora, & Caldwell, 2016; Lehtonen, Lehtonen, & Markku, 2004).

Figure 2: Interactions between social capital and othe forms of capital. Negative interactions are marked with an asterisk (*).



3

Measuring Social Capital in Other Well-Being Index Projects

Since the late 1990s, multiple efforts – by governments, international agencies, civic NGOs, and private firms – have sought to expand the understanding of well-being beyond the narrow rational-economic scope of growth measures such as GDP. As a basis for our suggestions of critical resources and measures in the Israeli context, we identified and reviewed the relevant academic literature, and we also looked at several prominent well-being indexes that incorporate social capital measurements:

- The OECD's **Better Life Index** and the World Bank's **Social Capital Integrated Questionnaire (SC-IQ),** led by Michael Woolcock and Deepa Narayan, are the most notable initiatives seeking to apply and measure the concept of social capital in the international development context (Grootaert et al., 2004; Knack, & Keefer, 1997; OECD, 2017; Van Deth, 2003; Woolcock, 1998; Woolcock, & Narayan, 2000).

- Both the OECD and the UN adopt the *social sustainability approach* in seeking to determine *global wellbeing indicators* (Boyer et al., 2016; Costanza et al., 2016).[6] This approach adds to the components of social capital (reviewed in section 2C) a measurement of *subjective wellbeing*, that is, of peoples' sense of fulfillment, positivity, happiness and personal growth, which are

6 The social sustainability approach combines various theoretical approaches with normative goals, such as the UN Sustainable Development Goals (SDGs) (Boyer et al., 2016; Costanza et al., 2016). In this context, social capital is seen as one among several factors determining *sustainable well-being*, the ability to maintain well-being for future generations.

closely correlated with the cognitive components of social capital (Helliwell, & Putnam, 2004; Matsushima, & Matsunaga, 2015; OECD, 2017). Accordingly, we include subjective well-being in the suggested model of social capital, alongside the theoretical components reviewed in the previous section.

- International academic surveys such as the World Values Survey (WVS) and the European Social Survey (ESS), as well as national-level surveys such as the **Canadian Index of Wellbeing (CIW)**, the **UK Quality of Life Counts (QLC)**, the **Social State of the Netherlands (SSN)**, and the **Measures of Australia's Progress (MAP)**, include measures of social capital as well as well-being indices, usually combining data on social capital from social surveys with macro-level data regarding civic functions on municipal and national scales.

- The **Social Capital Community Benchmark (SCCB)** was devised and data was collected for it in the first decade of the 2000s in the "Saguaro Seminar," which emerged from Robert Putnam's Harvard lab. This initiative is no longer operational but has been influential in social capital measurement.

- In Israel, the **National Well-being, Sustainability and Resilience Index (NWSRI)** was launched in 2012, following several years of development by various government agencies and NGOs. Social capital is measured in the NWSRI in two fields: (1) civic engagement; and (2) personal and social welfare. The Index's social measures are drawn from the Israeli Social Survey (ISS) [הסקר החברתי] conducted annually by Israel's Central Bureau of Statistics.

Appendix 1 summarizes the relevant topics in the above-mentioned surveys and presents some sample questions drawn from them. Our review helped us identify several trends in the structuring of social capital indexes. First, the categorization of social capital components varies among the indexes, most notably with regard to questions on *trust*, which sometimes stand independently and sometimes are incorporated into other components (like "community vitality") or divided between sections. Second, the localization of social capital measures is crucial for placing them in context, as seen,

for example, in the measurement of sentiments toward the EU in European countries, or in the measures of informants' sense of belonging to indigenous tribes in the Australian survey. Third, proxy measures can be used on various scales in accordance with subgroups of interest. For example, the CIW includes the proportion of women in parliament as a measure, and the QLC counts the implementation of sustainability plans in municipalities.

4

Critical Resources

This section outlines the four sets of social capital resources that we find universally applicable, based on the academic literature and its application in well-being indexes. To measure their availability and functioning in the Israeli context, we suggest a multi-scalar set of social capital components that affect well-being as our outcome of interest. For each social capital resource, we explain how it is related to well-being and suggest appropriate measurement indicators, based on the indexes reviewed above.

- **On the micro level**, the well-being of individuals and households is dependent on *networks of support* and *opportunities for personal mobility and growth*, both of which may be measured using *structural network indicators*.
- **On the meso level**, social capital resources are required to maintain the internal cohesion and resilience of each group, as well as the delicate relations between the disparate "tribes" of Israeli society. *Cognitive* and *collective* measures are used on the meso level.
- **On the macro level**, the crucial social resources, measured using secondary data and proxy indicators, reflect the functioning of key democratic institutions.

A

Network Resources

The first micro-scale resource that directly affects individuals is *bonding* connections, which provide material and psychological support. Most people rely on their immediate circles of family and acquaintances for building bonding connections. The importance of networks becomes crucial in precarious situations, particularly for people and communities that suffer from isolation, such as migrant communities (Portes, 2000) and the elderly. For low-income families, the effect of networks of support has been correlated primarily with mechanisms of coping, rather than with social mobility (Henly, Danziger, & Offer, 2005). The need for social capital is felt acutely in times of crisis, when aid is most needed and most difficult to provide (Aldrich, 2011; Sherrieb, Norris, & Galea, 2010).

The second set of network resources, and, as noted, the most widely accepted across theoretical approaches, is the *opportunities* that accrue to individuals via their networks. Granovetter (1973) famously found that weak ties are more useful for job-seekers, as they provide information on opportunities from outside an individual's networks. Coleman's (1988) seminal paper discussed the effects of "closure" – the connections between parents in a community – on the educational attainments of their children.

Network opportunities are increasingly found and maintained *online* (Ahn, 2012; Ellison, Steinfield, & Lampe, 2007; Lee, 2017). *Online social capital* has been measured primarily using Williams's (2006) Internet Social Capital Scale (ISCS), a twenty-question survey that assesses bonding and bridging social capital, online and offline (Ellison et al., 2011; Mou, & Lin, 2017; Popa, Theocharis, & Schnaudt, 2016). Facebook usage, in particular, was found to expand *bridging* social capital by allowing users to seek information, maintain weak ties, and turn them into closer ties (Ellison et al., 2011). However, the ISCS has been criticized for its problematic construction of the bridging and bonding concepts (Appel et al., 2014).

Interactions between individuals also affect social capital on a larger scale, as they do economic and human capital. More connections between people lead to better information flows, lower transaction costs (for oversight and regulation), and a better environment for innovation and entrepreneurship (Halpern, 2005). The effects on social and economic developments will be more pronounced if these interactions create opportunities for connections between people of dissimilar backgrounds; as Bjørnskov (2007, p. 5) puts it: "Anything that reduces the social distance between the citizens of a country could be expected to lead to more trust." Hence, investment in social infrastructure serves as a multiplier for economic development efforts (Woolcock, 2010). Proliferation of connections in a network also benefits health, by exposing people to information on proper treatment and disseminating norms of healthy behavior (Ferlander, 2007; Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997).

Table 1. Components of Network-Structural Resources and Sample Measurement Questions

Component	Sample questions (source questionnaire)
Social support	
Number of close friends/family members	How many of your family members do you feel comfortable to talk with in personal matters? (ISS)
Frequency of social meetings	How often do you meet socially with friends, relatives, or work colleagues? (ESS) How frequently do you meet or talk on the phone with friends? (ISS)
Frequency of online conversations	In the past 3 months, have you used the internet for engaging in online conversations, for example in chat rooms, WhatsApp, Twitter, Facebook? (ISS)
Loneliness	How much of the time during the past week have you felt lonely? (ESS)
Number of people to ask for a small loan	If you suddenly needed a small amount of money, how many people beyond your immediate household could you turn to? Of those people, how many do you think are currently able to provide this money? (SC-IQ)
Asking for help from: family, friends, neighbors, online acquaintances, colleagues	If you suddenly faced a long-term emergency such as the death of a breadwinner, how many people beyond your immediate household could you turn to who would be willing to assist you? (SC-IQ)
Network diversity	
Origin of friendly relations	Where did you meet your friends? (work, school, university, army, neighborhood, social activities, online / internet) (ISS 2014)
Friends from out-groups	Do you have close friends that are of a different gender, age group, religion, level of religiosity, ethnicity, education, or income level? (ISS)
Linking social capital	In the past 12 months, have you met with (an elected official / municipal official / government official / union official) (SC-IQ/Resource Generator)

B

Collective Associational Resources: Civic Engagement and Efficacy

On a meso scale, social capital resources stem from the norms of reciprocity that inhere in civil society associations, communities, and organizations. Associational activity could be in a formal organization (such as a neighborhood association, labor union, or religious group), or in an informal community with a set of collective features (such as neighbors in an apartment building, a running team, or a closed Facebook group). Building on the well-being perspective, we suggest a holistic approach that examines all collective resources, with a focus on associational resources that contribute to the *sustainability* and *cohesion* of communities and associations (Dempsey, Bramley, Power, & Brown, 2011; Grootaert et al., 2004). This includes some subjective measures that relate directly to matters of collective action.

A cohesive community is built on common values and identities and promotes social order, solidarity, and interactions between people (Forrest, & Kearns, 2001). Cohesion is a resource that facilitates *collective* action toward shared goals. On a local scale, cohesion is reflected in the services available to a community, management of public spaces and resources, and mechanisms for discouraging the negative exploitation of shared resources ("the tragedy of the commons"; Ostrom, 2000). Cohesion thus adds an informal layer of surveillance to public spaces ("eyes on the street"; see Jacobs, 1961 and Sampson, 2012). Well organized groups and communities may also be better at advocating for allocation of resources and policy changes by government agencies, a trait that is crucial for disadvantaged communities (Davis, 1991). Online communities, too, can encourage collective action by connecting individuals with a shared interest in a topic requiring action (Popa et al., 2016).

In times of crisis, collective action is crucial to the resilience of communities and their ability to achieve a positive trajectory of recovery (Norris et al., 2008). In the short run, communities with strong bonding capital will come to

each other's aid and provide responders with information on their neighbors. Later, when long-term recovery begins, bridging social capital is crucial to securing resources from government, civil and welfare groups, and from other communities, to provide solutions outside the community, such as temporary relocation for homeless families (Aldrich, 2011; Aldrich, & Meyer, 2015). In such contexts, social capital is one of several interconnected resources of resilience and must be accompanied with material investment in resources and preparedness (Norris et al., 2008).

Associational social capital is often measured at the community level, using aggregate measures such as per capita civic or political engagement in social, political, and voluntary activities, or the "density" of activities in a community (Putnam, 2000; Van Deth, 2003). This requires a locally tailored classification of organizations, based on the cultural and material significance of each type of activity to the local context (Grootaert et al., 2004; Knack, & Keefer, 1997).

Another classification method identifies activities that produce "bridging" connections – for example, the contributions made by civil society organizations to the creation of "cross-cutting" (inter-group) connections (Jamal, 2008; Pickering, 2006; Rupasingha, Goetz, & Freshwater, 2006). Surveys also address *collective efficacy* by asking respondents to recall cases in which their community mobilized to improve their surroundings or to assess the probability that such a collective action might take place.

Associational civic activity can be measured on an individual scale through questions regarding the amount of time (volunteering) and money (giving) spent on voluntary activity. Development-oriented indexes, such as the World Bank's Social Capital Integrated Questionnaire, record involvement in organizations that promote social capital in poor societies, such as micro-finance groups and agricultural cooperatives (Grootaert et al., 2004).

Table 2. Components of Collective Associational Resources and Sample Measurement Questions

Components	Sample questions (source questionnaire)
Group activity / membership	
Membership in group	Please tell me if anyone in this household belongs to a group such as: a labor union, neighborhood committee, political movement, parent-teacher association, sports group, youth movement, etc. (SC-IQ) Additional: activists, sport, & leisure, religious or spiritual
Membership in online community	
Membership in union	
Membership in religious group	
Volunteering	
Volunteering in organizations	In the past 12 months, how often have you been involved in activities for voluntary or charitable organizations? (ESS)
Hours volunteering	In total, how many hours have you spent volunteering per month in the past 12 months? (ISS)
Informal volunteering	In the past 12 months, did you provide anyone with health-related or personal care, such as emotional support, counselling, providing advice, visiting the elderly, unpaid babysitting? (CIW)
Causes/Areas volunteered in	
Giving	
Total giving	In the past 12 months, have you donated money to organizations or private individuals? How much? (ISS)
Causes donated to	To what organizations or individuals did you donate? (ISS)
Efficacy and civic engagement	
Belief in change	In your opinion, can people in your locality affect their own well-being? (ISS)
Voting	Did you vote in the last general election? (WVS)

Components	Sample questions (source questionnaire)
Efficacy and civic engagement (continued)	
Involvement in civic activity	In the last 12 months, have you cooperated with others to improve things in your living environment? (Petition, boycott, demonstration, rally, correspondence with representative, online/ media opinion, public participation) (ESS)
Involvement in political campaigns	Have you signed a petition, attended a political meeting or rally, worked on a community project, participated in any demonstrations, protests, boycotts, or marches? (SCCB)
Political engagement	On a typical day, about how much time do you spend watching, reading, or listening to news about politics and current affairs? (ESS)

C

Cognitive Resources (Micro and Meso Scale)

Cognitive resources are the subjective perceptions and beliefs of individuals that increase the propensity for social behavior. The basic cognitive components of social capital are trust and shared norms of reciprocity and solidarity. These are intangible resources, and therefore their measurement is based on respondents' personal assessments and evaluations.

Trust is frequently discussed as a critical resource interlinked with *subjective well-being* and other resources (Algan, & Cahuc, 2013). From the perspective of sustainable well-being, the critical cognitive resources are those that reflect a positive disposition toward others, a sense of belonging to a community, and a positive outlook on the future. Hence, they are both a micro-scale resource (reflecting personal beliefs) and a meso-scale resource (reflecting social trust and stability of communities).

Measurement of cognitive resources is often narrowed down to a single indicator of generalized trust, which has been dubbed the Canonical Question: "Generally speaking, do you believe that most people can be trusted, or that you can't be too careful in dealing with people?" This question can also be divided to address specific subgroups, thus accounting for both bridging and bonding social capital. Measuring out-group trust is particularly important, since the language of the canonical question ("most people") is subjective and may be interpreted as meaning either similar or dissimilar people (Delhey, Newton, & Welzel, 2011).

Another common variation asks respondents to assess the likelihood that a lost wallet will be returned to its owner in a given locality. The World Values Survey, for example, measures trust toward specific ethnic and religious groups. Trust in others and subjective well-being have been found to be highly correlated and are also linked to individual benefits in health and economic mobility (Calvo, Zheng, Kumar, Olgiati, & Berkman, 2012; Helliwell, & Putnam, 2004; Kwon, & Adler, 2014). In-group trust and a sense of belonging to a community are individual-scale proxy indicators for norms of reciprocity and cohesion in a community (Forrest, & Kearns, 2001; Norris et al., 2008). Hence, these resources are also considered critical for building collective social capital. On a broader scale, in the local context, out-group trust may be a critical indicator of the risk of conflict between the different factions comprising Israeli society.

Another critical subjective measure is *trust in institutions*, such as the branches of government, the media, NGOs, and the police (Grootaert et al., 2004). Indeed, generalized trust can hardly prosper in the absence of basic governmental functions. However, government oversight can be detrimental to social capital, if it discourages civic behavior and thwarts bottom-up social organization (Bundi, & Freitag, 2020; Leonard, 2004; Woolcock, 1998). Similarly, economies and political systems in societies with high levels of trust can function properly with less intermediation, regulation, and enforcement (Knack, & Keefer, 1997).

Table 3. Components of Cognitive Resources and Sample Measurement Questions

Components	Sample questions (source questionnaire)
Trust	
Generalized	Would you say that most people can be trusted, or that you can't be too careful in dealing with people? (WVS)
In residents of neighborhood (when applicable)	If you lose a wallet with identifying details near your house, do you believe it will be returned with all its contents? (ISS)
In residents of city/ locality	In general, do you agree or disagree with the following statement: In this village/neighborhood, one must be alert, or someone is likely to take advantage of you. (SC-IQ)
Trust by gender (men/ women/other)	How much do you trust the people in these categories: People from your ethnic or linguistic group/race/caste/ tribe; people from other ethnic or linguistic groups/ races/castes/tribes. (SC-IQ)
Trust by religion (Jewish /Muslim/Druze/ Christian)	
Trust by religiosity (very religious, religious, not religious)	
Trust by ethno-national group (e.g., Jews/ Palestinians/Bedouins)	
In institutions: government branches and agencies, emergency forces, local government, media outlets	Please tell me on a score of 0-10 how much you personally trust each of these institutions: parliament, legal system, police, politicians, political parties, EU parliament, UN. (ESS)
Personal safety	How safe do you – or would you – feel walking alone in this area after dark? (ESS)
Belonging / norms of reciprocity	
Sense of belonging to a community	Percentage of population reporting a somewhat or very strong sense of belonging to community. (CIW)
Satisfaction with relations	Are you satisfied with your relations with your neighbors / family members? (ISS)
Satisfaction with locality	Generally, are you satisfied with the area in which you live? (ISS)

Components	Sample questions (source questionnaire)
Belonging / norms of reciprocity (continued)	
Feeling discriminated against	In the past 12 months, do you feel that you have experienced discrimination or have been treated unfairly by others? In which places or situations? (MAP)
Positive outlook	
Overall satisfaction	All things considered, how satisfied are you with your life as a whole nowadays? (ESS)
Outlook for the future (nationally, personally)	Compared to your life today, do you think that your life in the coming years will be better, the same or worse off? (ISS)

D

Macro-Scale Resources

The social capital of regions and nations is reflected in various proxy measures of civic and democratic functioning. Resources of this type are usually inferred from secondary data sources. Voter turnout is the most prominent proxy indicator for civic-political engagement (Putnam, 1993). Freedom of the press at the country level, and crime and corruption indexes, are also used as proxies for civic health, but they are useful mostly on an international comparative scale (Bjørnskov, 2007; Sampson, 2012; Vemuri, & Costanza, 2006).

Whether civic engagement is a determinant of (Putnam, 1993) or a resource for social capital (Uslaner, 2002), or whether the two are merely correlated (Portes, & Vickstrom, 2011), a relationship between the two factors exists. Social capital indexes thus suggest a macro-scale approach, based on various proxy measures that relate to civic and associational behavior, trust, and other social capital components. One clear downside of such measures is their broad scale. Hence, proxy measures on the scale of the municipality or locality should also be considered – for example, local election voter turnout or local ranking by the Gini index of income or wealth inequality.

On a national level, government functions that create a sense of enforced norms were found to be a crucial predictor of generalized trust (OECD, 2017). Knack and Keefer (1997) found higher cognitive social capital in nations with efficient regulation of property and contracts and with low inequality, suggesting that enforcement of trust-based transactions is crucial for trust to flourish. As Edwards and Foley (1998) note, investment in democratic culture is best pursued by instilling a democratic culture within the institutions of democracy itself. In the OECD framework (OECD, 2017), this is represented by the promotion of trust in the police and the national government and encouragement of stakeholder engagement – people's feeling that their voices are heard in decision-making processes that affect them.

Table 4. Components of Macro Resources and Sample Measurement Questions

Proxy Measures	Source data
Voter turnout / participation	National data
Political extremism	Politically and socially, how would you describe your own general outlook – as being very conservative, moderately conservative, middle-of-the-road, moderately liberal, or very liberal? (SCCB)
Corruption	Corruption Perceptions Index (CPI)
Crime	Number of violent crimes reported per capita
Freedom of the press	Press Freedom Index (PFI)
Economic inclusion	Gini index (regional or national)

5

Challenges to Maintaining Social Capital in Israel

The critical resources outlined above are universally accepted. To assess their level of criticality in the Israeli context, we outline several challenges that are specific (although not necessarily unique) to Israel and that Israel will continue to face in the coming years. For each challenge, we discuss its relation to social capital and the measures that would reflect the country's ability to withstand these challenges.

The five outlined challenges are: (1) inherent social *diversity*, persistently correlated with *inequality*; (2) the ongoing ethno-national Israeli-Palestinian *conflict*; (3) the threat of *climate change* and the search for a sustainable lifestyle; (4) the effects of increasing *urban density* on society; and (5) the expected *aging* of the country's population. We then describe two additional noteworthy challenges, and we conclude with a proposed preliminary list of critical components to be monitored in the future.

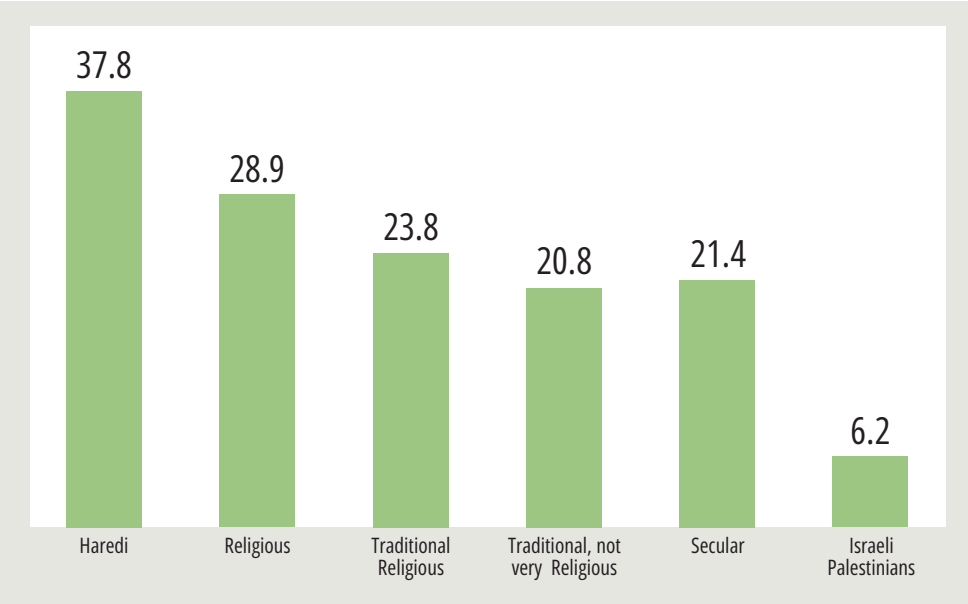
A

Social Diversity and Inequality

The diverse and often divided nature of Israeli society has critical implications for the country's ability to maintain social capital on a national scale. Apart from its four main sectors — ultra-Orthodox/Haredi Jews, secular Jews, religious

Jews and Israeli-Palestinians – Israeli society is characterized by further social schisms, such as those between Ashkenazi and Mizrahi Jews and between *'olim* (new immigrants) and *tzabarim* (veteran Israelis), and by further ethno-cultural subdivisions within each social category (e.g., Bedouin Arabs, Ethiopian Jews, immigrants from the former USSR, etc.). Gender gaps add another dimension to these schisms, often creating a dual disadvantage for women, especially in more traditional communities (Abu-Rabia-Queder, 2017).

Figure 3. Percent of Individuals in the Different Sectors Who Volunteered in the Past Year



Source: ISS, 2018

As each group subscribes to different values, norms and definitions of community, social capital may be defined and developed differently in them. For example, there are different forms and levels of philanthropic giving in each sector of Israeli society (Drezner, Greenspan, Katz, & Feit, 2017). Data on volunteering from the ISS shows substantial variance between different groups (see **Figure 3**), and the overall density of civil society organizations in Israeli-Palestinian society is much lower than in Israeli-Jewish society (Jamal, Almog-Bar, Koukvine, & Eseed, 2019). While it might seem that volunteering is scarce among Arab Palestinian citizens of Israel, further research has shown that there is much unpaid social activity linked to familial or religious contexts,

which is not understood by the participants as "volunteering" (Jamal, 2017). Still, the informal structure of civic engagement activity may hamper political efficacy and resilience among Arab Palestinian citizens of Israel.

In Haredi (ultra-Orthodox) communities, in-group voluntary and support activity is much higher than in other groups. Tight-knit communal ties are an important source of support, but also an obstacle to social mobility (Chernihovski, & Sharoni, 2015; Malchi, 2016; Monnickendam-Givon et al., 2016). In general, when assigning measures of culturally specific social capital, "dark sides" (Portes, 2000) should be taken into account. Traditional networks of support should be maintained, while also providing individuals – particularly women – with opportunities to transcend traditional roles.

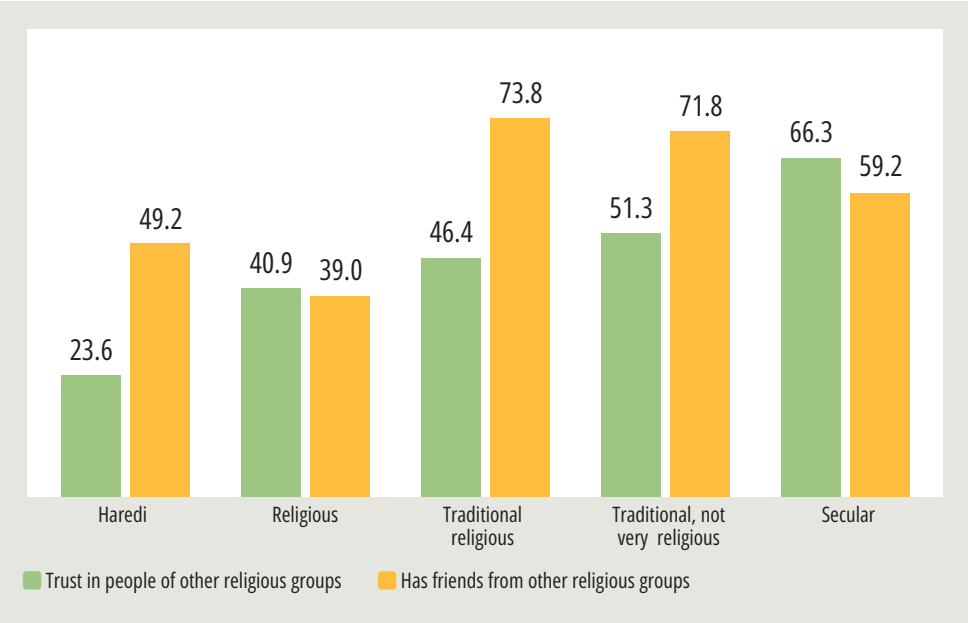
The cross-border social ties of Israelis with overseas diasporic Jewish communities (primarily in the USA and other English-speaking countries) is another important factor in the development of social capital (Amit, & Litwin, 2010). While immigrants from the United States to Israel have mainly formed social ties with like-minded immigrants from English-speaking countries, immigrants from FSU countries have accumulated more bridging social capital (Amit, 2012). The transnational nature of immigrants from English-speaking countries has helped them maintain religious, philanthropic, economic, social and even academic ties that are crucial to accruing social capital, exerting an influence on both established Israelis and newcomers (Amit, & Riss, 2007; Berger, Jacobson, & Waxman, 2007).

The first challenge of a diverse society is to maintain the social capital of each group, based on its distinct characteristics, while maintaining general social cohesion and bridging connections.

The second and perhaps most critical challenge to social capital stems from the tensions between the groups. Diversity is a known predictor of negative consequences of social capital, on both local and national scales (Hooghe et al., 2009; Portes, & Vickstrom, 2011). Survey data from Israel shows that intergroup trust varies between groups and does not correlate with reported intergroup social connections (see **Figure 4**): Most traditional Jews report having a friend

of a different religion, but less than half trust people of other religions; for secular Jews, these proportions are reversed. This perplexing discrepancy suggests that intergroup relations require a systematic survey that will examine perceptions of subgroups in Israeli society in greater depth.

Figure 4. Percent of Jewish Israelis Reporting Cross-Cutting Relations and Trust



Source: ISS, 2014

In a diverse society, the self-selecting nature of social interactions reduces the ability to establish common norms and institutions and leads to mistrust between groups. However, several studies have shown that it is not diversity itself that predicts a lack of social trust, but rather the perpetuation of segregation and the lack of opportunities to meet that keep people from trusting those different from themselves (Hooghe et al., 2009; Stolle et al., 2008).

Hence, intergroup connections (which the ISS data implies are not uncommon) **are crucial to the overall cohesion of Israeli society**.

Some contexts are better at producing bridging ties than others. In Bosnia, for example, Pickering (2006) found that settings that fostered inter-group relationships are culturally diverse, promote weak ties rather than tight ones, and allow frequent interaction around practical issues. This includes mixed

workplaces that focus on defined goals, rather than promoting interaction for its own sake. Research into social capital in Haredi society in Israel has found a positive relation between employment of Haredi Jews and higher levels of reported social trust and cross-cutting relations (Malchi, 2016).

Israel's societal divisions also follow socio-economic lines, with Haredi Jews and Israeli-Palestinians being the most disadvantaged groups (and women the most disadvantaged within these groups). Inequality is a negative predictor of social capital: Egalitarian societies have higher levels of social capital (DiMaggio, & Garip, 2012). Inequality damages various measures of well-being, not least education and health, which are both closely aligned with social capital (Briggs, 2003; Kawachi et al., 1997). Furthermore, since social networks (particularly bridging networks) promote social mobility, they may also exacerbate inequalities if the well-off sectors of society are well connected, while the rest do not enjoy similar resources (DiMaggio, & Garip, 2012).

Social Capital Resources for Addressing Diversity and Inequality

Based on these multiple effects, **we suggest that diversity and inequality are the most critical challenges to the maintenance of sustainable social capital in Israel**. Various social capital components are required to meet this challenge: Women and individuals from minority groups should have the opportunities that stem from cross-cutting networks of acquaintances, and should be represented in leading economic sectors. On a **national level**, cohesion in the form of generalized trust and shared identities should be encouraged, as well as trust in democratic institutions. The internal cohesion of each **community** should be maintained through its own set of institutions and associational activities.

Relevant measures of sustainable social capital in the Israeli context:

- **Network diversity**

  Note: We suggest that survey questions on diversity of connections, rather than sufficing with generalized references – for example, to individuals "of a different religion" – make explicit reference to population groups in the various sectors, such as Muslim Arabs, Christian Arabs, Ashkenazi Jews, Mizrahi Jews etc.
- **"In-group" associational activity**

  Note: Based on the SC-IQ, we suggest a sector-specific mapping of key organizations, including religious associations, to identify divergent patterns of volunteering.
- **Political efficacy**

  This is a measure of a community's ability to mobilize for common goals. It is measured through subjective assessments of the potential for cooperation between neighbors, as well as the level of political engagement of individuals.
- **"Out-group" levels of trust**
- **Trust in institutions**

  Note: Add questions on trust in the police, the Knesset, the IDF and local authorities.
- **Voter participation**
- **Overall diversity in "driver" economic sectors**

  This is a new macro-measure that requires development. It will measure the participation of minority groups in "driver" economic sectors that are associated with social mobility, such as high-tech industries, academic institutions and elite professions. The list of sectors should fit definitions of human capital, to allow cross-referencing between human and social capital indexes. Relevant indicators would be the overall participation of minority groups in the sector and the degree of mixing/segregation within workplaces. Gender gaps will be measured here, too.

B

The Israeli-Palestinian Conflict

The consistent presence of the Israeli-Palestinian conflict in Israel takes a toll on the well-being of the region's inhabitants in various ways. External threats to a society can enhance both the positive and the negative effects of social capital. While there is some overlap with the diversity challenge, there are distinct adverse effects that stem from exposure to intermittent extreme outbreaks of violence. Studies done in Israel have linked life under conflict to heightened inter-group prejudice and out-group aggression, and also to the erosion of subjective well-being (Eshet, & Lev, 2011; Grossman, Manekin, & Miodownik, 2015). By contrast, Zusman and Romanov (2006) found that terror attacks during the second Intifada led only to a temporary decrease in subjective well-being, which was insignificant in the long run.

Social capital can be instrumental in maintaining resilience in times of crisis. Preexisting networks and group solidarity mitigate the negative effects for afflicted individuals (Eshet, & Lev, 2011). Smaller villages (kibbutzim, moshavim, etc.) showed higher resilience during and after the 2012 "Pillar of Defense" operation in Gaza, compared to neighboring towns (Cohen, Leykin, Lahad, Goldberg, & Aharonson-Daniel, 2013). In a study of the Gush Katif communities before and after the 2005 disengagement, Billig (2006) similarly found that the communities had accumulated social capital from enduring the threat of terror, and that these effects were more pronounced in the more ideological communities. This accumulated social capital also helped mediate the shocks caused by the Gush Katif communities' subsequent displacement in 2005.

Social capital in times of conflict also relates to trust in government institutions. In such times, citizens put greater trust in organizations that deal with emergencies, compared to other institutions (Mizrahi, Vigoda-Gadot, & Cohen, 2019). In Gush Katif, by contrast, social capital was sustained in explicit defiance to sources of authority – namely, the IDF and the government (Billig, 2006). The case of Gush Katif thus also demonstrates the potential exclusionary

effects of associational activity within groups afflicted by conflict. Trust in government may relate in different ways to resilience in times of conflict, depending on the political inclinations of each societal group.

Social Capital Resources for Addressing Conflict Situations

The threat of conflict in Israel should be met with efficient networks of social support for affected **individuals**, and afflicted **communities** should be allowed to act collectively and use collective resources to endure crises. On an **inter-community** level, out-group trust and trust in institutions are key measures for the effect of conflict events on overall cohesion, along with measures of political extremism.

Relevant measures:

- **Social support**
- **Trust in others and in institutions**
- **Belonging**
- **Group activities**
- **Trust in information sources / role of media**
  We suggest adopting a question similar to ESS no. E22, asking for the respondent's level of agreement with the statement: "The media in Israel provide citizens with reliable/accurate information to judge/assess the government," as well as a question regarding the reliability of media in times of emergency.
- **Extreme political views**

C

Climate Change and Sustainability

As the effects of climate change intensify globally, Israel faces risks of rising sea levels, rising average temperatures, desertification, sea water acidification, and extreme weather events (Cramer et al., 2018; Ministry of Environmental Protection, 2017). While the exact effects are still unknown, precarious communities are expected to be disproportionately affected, due to their limited ability to divert resources for adaptation (Dempsey et al., 2011).

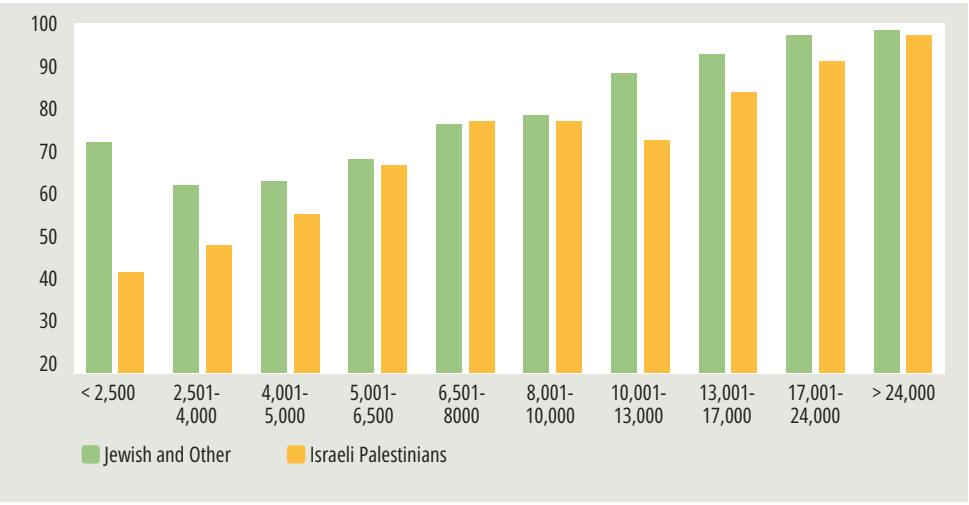
The threat of the climate crisis is similar to the threat of conflict in that its exact effects are unforeseen; they pose "crisis" conditions to society; and they require preparation, mitigation, and adaptation at all scales, national, regional, local, and individual, and among all types of institutions, governmental, business, and civil society (Aldrich, & Meyer, 2015; Magis, 2010).[7] However, we choose to present the two challenges separately in order to point out the distinct social capital resources that are associated with climate adaptation. In the context of climate change, collective action of individuals and civil society actors is needed not only in response to extreme events, but also for mobilizing and advocating for resources on the political and cultural (public opinion) levels (Magee, Scerri, & James, 2012). Furthermore, the threats posed by climate change are not politically or ethnically marked; therefore, cooperation across social groups may be more feasible than in times of political conflict / war.

Social media use can assist in managing disaster events. Twitter usage in particular has been found in times of crisis to be a reliable and accessible source of information, which can replace more traditional media channels (Simon, Goldberg, & Adini, 2015). Online interaction can also assist in reducing the erosion of social trust that may arise from crises (Mou, & Lin, 2017). However, the propensity to use social media is affected by income. ISS data show internet usage in Israel to rise with income and to be higher among Jews

7 A notable example of local level preparation for climate change may be found in the resilience plan of Tel Aviv-Yaffo, that focuses on the low-income neighborhoods of the city. See this link

and others compared to Israeli–Palestinians (**Figure 5**). This gap suggests a lower level of disaster preparedness among disadvantaged groups and requires further attention in the context of extreme climate events.

Figure 5. Share of Internet Usage by Net Income, in ILS



Source: ISS, 2018

Social Capital Resources for Addressing Climate Change and Sustainability

Resilience is primarily a **community** resource. Managing climate change requires building a local organizational and informational infrastructure, as well as access to information sources. Communities need to develop political efficacy. Online social capital is crucial for **individuals**.

Relevant measures:

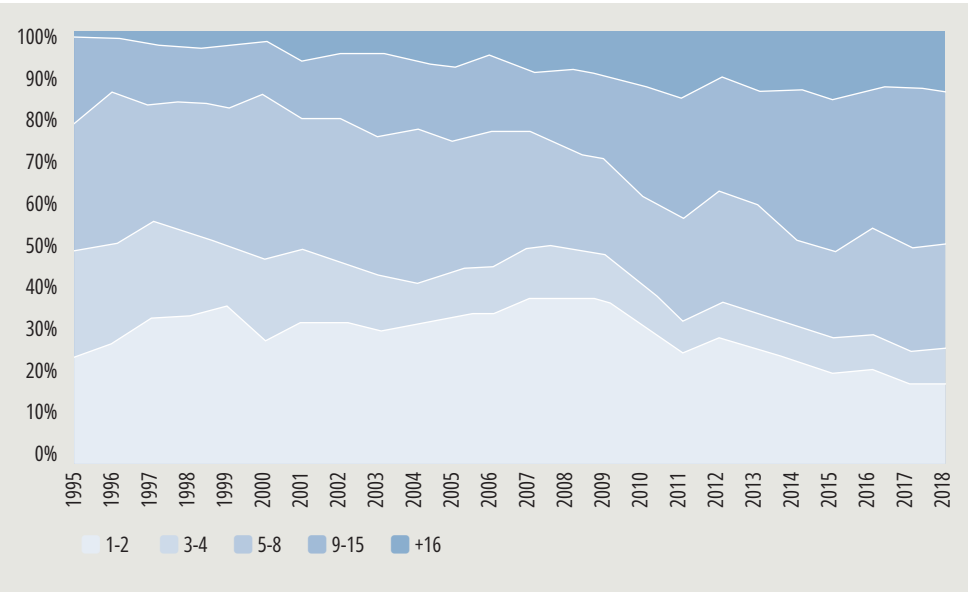
- **Social support**
- **Organizational density**
- **Political efficacy**
- **Associational activities**
- **Trust in information sources**
- **Digital proficiency**

D

Urban Densification

Israel has a limited supply of land and a rapidly growing population, a majority of which lives in urban areas (Razin, & Charney, 2015). In the next two decades, up to 67,000 new units per year, or around 1.5 million new units in total, will be required to meet the growth in population (Raz-Dror, & Kost, 2017). The national planning strategy put in place to meet this challenge involves increased urbanization, to be accomplished by building denser urban areas and densification of existing living environments (Geva, & Rosen, 2019), including in peri-urban Arab localities. In the past twenty-five years, new construction in Israel is increasingly taller and denser, with high-rise construction representing approximately half of all new building in recent years (see **Figure 6**).

Figure 6. Housing Units Built, by Number of Floors in Building

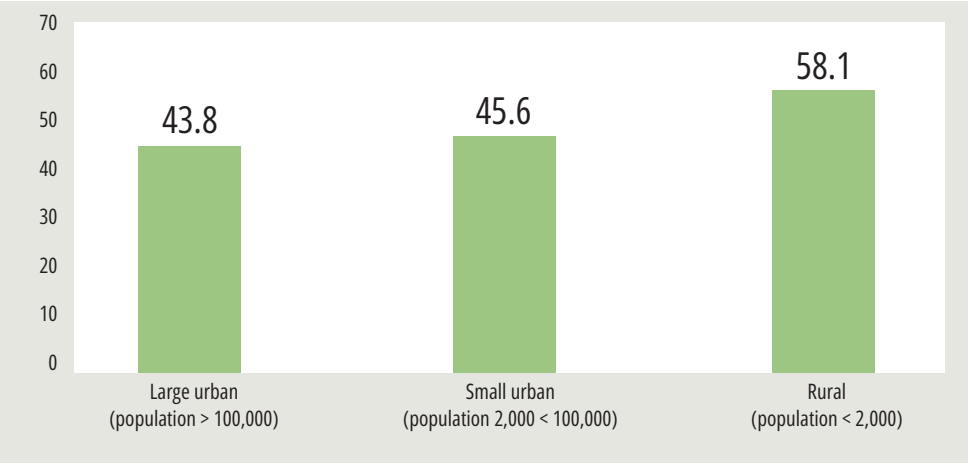


Compiled from Ministry of Construction and Housing data

Face-to-face interaction facilitates the formation of trust and encourages interpersonal engagement (Ostrom, 2000; Putnam, 2000), and dense neighborhoods have long been incubators of social capital (Jacobs, 1961).

Yet, along with the clear advantages of urban density to physical and human measures of sustainability, density also tends to be negatively correlated with social capital (Bramley, & Power, 2009; Holden, 2019). This presumably is due to reduced familiarity between neighbors, increased exposure to nuisances, and increased loneliness in dense urban environments. In Israel, too, generalized trust is lower in larger urban settlements (see **Figure 7**).

Figure 7. Generalized Trust by Size of Locality (Jewish population only)



Source: ISS, 2018

Densification in the form of urban renewal may also sever existing community ties and networks of support in redeveloped neighborhoods, leading to a loss of social capital resources (August, 2014; Geva, & Rosen, 2019; Shaw, & Hagemans, 2015). Despite attempts to build social capital and relations, particularly in mixed-income neighborhoods, research shows that social divisions tend to persist even in mixed living environments, in Israel as well as abroad (Blatman-Thomas, 2017; Lees, 2008). Diverse urban settings such as mixed cities can also create implicit barriers to mobility, particularly for women (Greenberg Raanan, & Avni, 2020). However, residents of diverse neighborhoods who interact with their dissimilar neighbors show higher average levels of trust (Stolle et al., 2008).

Densification and urbanization can nevertheless be positive social drivers. Metropolitan areas provide opportunities for social and economic mobility (Glaeser, 2011). Urban neighborhoods can provide a sustainable sense of

community cohesion, if they allow a shared sense of belonging to develop (Forrest, & Kearns, 2001). The planning *process* can also be an important venue for promoting civic engagement, by creating more opportunities for formal public engagement, or through methods of bottom-up placemaking (Bratt, & Reardon, 2013). The latter methods refer to small-scale interventions in public space that are informed and often carried out by people in their own neighborhoods (Holden, 2018; Silva, 2016). This is particularly helpful in already-built spaces that were not built to encourage walkability and public encounters. Even under the constraints of density, urban planning and municipal governance can facilitate face-to-face interactions, foster a sense of belonging, and increase access to opportunities and services (Bramley, & Power, 2009; Kyttä, Broberg, Haybatollahi, & Schmidt-Thomé, 2016).

Social Capital Resources for Addressing Urban Density

Achieving social sustainability in conditions of urban density requires the monitoring of various indicators: **Individuals** living in cities should have access to opportunities such as employment and diverse services without losing their networks of support; metropolitan areas should remain diverse and accessible to all groups in society; the cohesion of urban **communities** should be expressed in levels of local trust and collective efficacy; and democratic functions should be expressed on a local-government level in measures of engagement in **local democracy**.

Relevant measures:

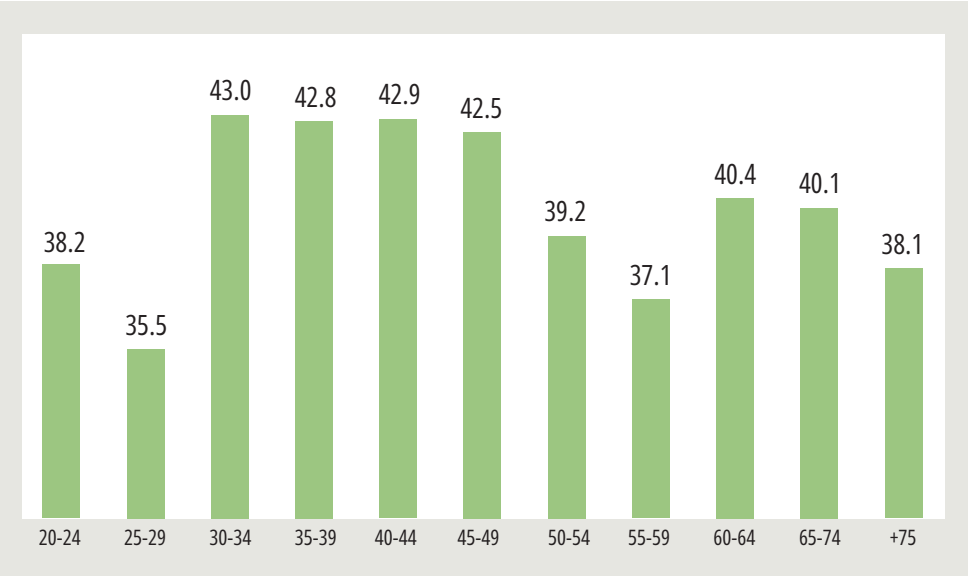
- **Loneliness**
- **Access to services**
  Note: We suggest developing an indicator for accessibility levels of basic services: healthcare, green spaces, education, bomb shelters, etc.
- **Inclusion**
- **Sense of belonging**
- **Political efficacy**
- **Local democracy**
- **Segregation or local inequality**.
  Note: We suggest developing a segregation index for neighborhoods and other localities. Gini coefficients may be calculated at the municipal scale.

E

Aging and Health

The share of elderly people in the population of Israel is expected to rise from 11% in 2015 to 14.6% in 2035. Older people in Israel, particularly among the Israeli-Palestinian and immigrant (*'olim*) populations, are at risk of deteriorating economic stability as their physical and cognitive functioning declines (Schwartz, & Litwin, 2019; Schwartz, Pascal, & Litwin, 2014). The aging of the population, in addition to its individual effects on the elderly themselves, will also increase the demand for health services and require more resources from caregiving family members and communities. In terms of social capital, older people report lower levels of life satisfaction, fewer social connections (Myers-JDC-Brookdale, 2018), and lower levels of generalized trust (see **Figure 8**) – yet these are critical resources for the elderly (Lubben, & Gironda, 2003).

Figure 8. Levels of Generalized Trust, (percent saying that "most people can be trusted") by Age Group



Source: ISS, 2018

At the same time, as life expectancy rises, the share of elderly people who are retired and in good health increases, too. This population group enjoys an abundance of free time, which could be used for associational activity and personal growth. Healthy retirees are an asset for building social capital in their communities, and such activities are also beneficial to the retirees themselves, since a lack of stimulating activities increases the rate of physical and cognitive deterioration of aging people.

Evidence from Israel and elsewhere shows that social capital can mitigate the adverse effects of aging. Generally, people with access to support manage better in situations of temporary or chronic illness (Ferlander, 2007; Kumar, Calvo, Avendano, Sivaramakrishnan, & Berkman, 2012; Villalonga-Olives, & Kawachi, 2015). Associational activity is pivotal for well-being at an older age: older people who volunteer report better health, cognitive functioning, and optimism (Schwartz et al., 2014). Among immigrants aged 50+, Amit and Litwin (2010) find a positive effect of various social activities (volunteering, caring for others, associational participation) on subjective well-being, regardless of socioeconomic background. Online connections, too, are associated with greater bridging and bonding social capital at an older age (Barbosa-Neves et al., 2018).

In the context of aging, therefore, maintenance of social capital will have clear positive effects on other forms of capital, primarily human capital.[8]

Social Capital Resources for Addressing Aging

Sustainable social capital for older **individuals** comprises robust networks of support and friendship to tackle loneliness; a positive subjective outlook on life; and, most importantly, belonging to cohesive **communities**, as expressed in rates of associational activity, both online and offline.

Relevant measures:

- **Loneliness**
- **Social support**
- **Positive outlook**
- **Associational activity**
- **Online networks and proficiency**

F

Further Challenges

Other forces that may influence the understanding of social capital formation in the Israeli context in the coming years are *changes in the labor market* (Algan, & Cahuc, 2013) and the *shifting digital-technological landscape* (Lev-On, 2019; Möhlmann, 2016; Warren, Sulaiman, & Jaafar, 2015). For example, the loss of several professions in the labor market, an increase in job shifts, changes in unemployment rates, the rise of migrant labor, and decreased job security are all trends with social capital implications.

8 Projects such as "Up 60+", run by JDC Eshel, address these challenges by creating age-specific interventions that combine social activities with financial, digital, and occupational capacity building.

The impact of technology on people's mobility and modes of communication, and the efforts to reduce digital inequality / the digital divide in Israel (Lev-On, 2019), are also critical to the daily lives of individuals and the preparedness of communities. The measures enumerated above address these challenges as well.

To conclude this section, we recommend developing a method for creating an index of critical social capital resources for Israel, on the basis of the knowledge summarized in this report. Each of the critical resources described in Sections 2 and 4 – network, collective-associational, cognitive and macro social capital – interacts differently with the Israel-specific challenges. Our determinations of *criticality* are based on the relations between resources and challenges:

- Diversity and inequality were determined to be the most pressing challenges. Therefore, resources pertaining to this challenge were marked as critical.
- Other social capital components were defined as critical if they were related to three or more of the challenges.

In Appendix 2, we set out a preliminary analysis of criticality and measurement for social capital resources in Israel.

6

Concluding Remarks: Toward an Index of Sustainable Social Capital in Israel

The concept of social capital was developed with the understanding that the well-being of societies relies on more than material and human growth. Individuals flourish and enjoy high levels of well-being when they can rely on robust networks of support, reach out to networks of collegial connections, engage in civic activity, and support civil society. Communities withstand hardships if their members invest time and effort in working together and looking out for those most in need. Nations prosper on the foundations built jointly by their inhabitants. Notions of generalized trust, shared norms of reciprocity, and a culture of civic engagement are critical to all these goals.

Israeli society has much to build on from the point of view of these resources, but it still lags regarding the sustainability of social capital. Intergroup tensions, the place of women in society, instability arising from prolonged conflict, the looming threat of climate change, the trends of growing urban density, and the aging of society — each of these challenges is intimately rooted in a social context and must be addressed in relation to the social capital resources that we possess or must develop.

We have sought in this review to offer a social capital vocabulary that fits the strengths and challenges specific to the Israeli context. Based on the extant literature and global experience in the measurement of well-being, we have

identified four critical resources needed to maintain sustainable well-being in Israel:

- **Network resources**, that is, *bonding* connections that provide *social support*, and *bridging* connections that facilitate *social mobility*. *These resources are critical for maintaining individual well-being.*

- **Collective associational resources**, that is, the overall involvement and investments of people in their communities and in civil society, in terms of *associational activity*, *volunteering* and *civic engagement*. *These resources provide a critical infrastructure for communities and for civil society and democracy.*

- **Cognitive resources**, that is, the personal dispositions of people regarding their place in society: levels of *trust* towards other people, feelings of *belonging* to a community and *positive outlooks* regarding the future. *These resources are a critical measure of the commitment of individuals to social cohesion.*

- **Macro resources**, that is, national-scale elements that maintain a functioning social fabric in a democracy, such as levels of voter participation, freedom of the press, low corruption levels, and relative equality. *These resources are a critical contextual measure for the democratic functioning of society.*

This outline rests on a firm theoretical and practical ground, yet, as with any broad model, it is open to deliberation. We hope that our conceptualization will serve as a starting point for a broader discussion of social capital as a shared national asset. In our review of concepts, components, indicators, and measures, we have aimed to look past the intangible origins of social capital and toward its practical use in maintaining sustainability. We look forward to engaging with readers to further define local challenges and explore issues of measurement and methodology.

7

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Appendixes

Appendix 1: Social Capital Measures in National and International Indexes

Source	Topics included in social capital measures	Sample indicators
World Values Survey (WVS), 2012	Social Trust	Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair? Would you tell me how strongly you agree or disagree with each of the following statements about how you see yourself? I see myself as: a world citizen; part of my local community; part of my nation; an autonomous individual
European Social Survey (ESS), 2012/13	Social Trust	Do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair? Would you say that most of the time people try to be helpful or that they are mostly looking out for themselves?
	Politics	How much would you say the political system in [country] allows people like you to have a say in what the government does? How able do you think you are to take an active role in a group involved with political issues?
	Subjective well-being, & social issues	Would you describe yourself as being a member of a group that is discriminated against in this country? Have you or a member of your household been the victim of a burglary or assault in the last 5 years?
	Personal and social well-being	To what extent do you receive help and support from people you are close to when you need it? To what extent do you provide help and support to people you are close to when they need it?

Source	Topics included in social capital measures	Sample indicators
Canadian Index of Well-being (CIW), 2016	Community vitality	% of population reporting unpaid participation in any activities on behalf of a group or organization in the past year (formal volunteering) % of population reporting a sense of belonging to community
	Democratic engagement	% satisfied with the way democracy works in Canada % of confidence in the federal parliament
	Time use	Average daily amount of time with friends (minutes per day)
	Leisure and culture	Average number of hours in the past year volunteering for culture/recreational organizations.
UK Quality of Life Counts, 2004	Building sustainable communities	# of local authorities with local action plans for sustainable development % of householders who thought their area had a lot of community spirit
Social State of the Netherlands (SSN), 2017	Public opinion	Positive assessments regarding own situation, the economy and society Institutional trust (in the justice system, the business community, the government, church and religious organizations) Agreement with the statement "people are free to say what they want"
Measuring Australia's Progress (MAP), 2013	Society indicators	Proportion of people who had no involvement in social and community groups in the 12 months prior to being interviewed Proportion of [...] people who identify with a clan, tribal group, language group, mission, or regional group
	Governance indicators	% of people who feel they have a say within the community on important issues
Israeli Social Survey (ISS), 2014	Social capital (annual topic, 2014)	Do you have friends that belong to a different gender, religion, or ethnicity, or differ from you in their age, income, religiosity, education? In the last 12 months, have you cooperated with others in your area to improve things in your living environment?

Appendix 2: Measuring Critical Social Capital Resources in Israel

The table below summarizes critical social capital resources and the challenges for which they are most valuable, in the Israeli context. For example, under network social capital, a network of social support is mostly critical to the challenges of managing conflict, climate change, and aging, while measures of loneliness are critical to understanding the effects of urban density and aging. Relevant measures are marked by gray cells. Below the table is a list of key components and suggested indicators. Each component was matched with a fitting survey question. Where not otherwise specified, questions followed by question code numbers in parentheses are taken from the Israeli Social Survey (ISS); in other cases, we suggest additions from equivalent surveys worldwide.

Table 5. Summary of Critical Social Capital Resources, by Type of Challenge in Israel. Gray cells indicate resources critical to meeting the relevant challenge.

		Social Capital Challenges in the Israeli Context				
Resources	**Measures**	*1. Diversity*	*2. Conflict*	*3. Climate Change*	*4. Urban Density*	*5. Aging*
Network (micro scale)	Network of social support					
	Network diversity					
	Online social capital	*(network diversity)*				*(the elderly)*
	Loneliness					
Collective Associational (meso scale)	Associational activity					
	Organizational density					
	Access to services					
	Political efficacy	*(minority groups)*				
Cognitive (micro, & meso scale)	Generalized trust, & trust in others					
	Trust in institutions					
	Trust in information sources					
	Sense of belonging					
	Positive outlook					
Institutional (macro scale)	Voter participation	*(general elections)*			*(local elections)*	
	"Driver" economic sectors diversity					
	Political extremism					
	Segregation/ inequality index					

Structural network resources and appropriate indicators (micro-scale)

Network of social support (criticality: high)

- Close friends and family (10.120 *or* SC-IQ 1.25)
- Meeting/talking with friends and family (10.30)
- Someone to count on in time of need (10.160)
- Someone to count on in an emergency (SC-IQ 1.30, 1.31, *or* ISS 10.230.4 — 2014 survey)

Network diversity (criticality: high)

- Friends from other social groups (10.430 — 2014 survey)
- Where did you meet your friends? (10.380 — 2014 survey)
- People from other groups are colleagues in my workplace / students at my school / my children's school / share a leisure activity with me (*to be developed*)

Online social capital (criticality: high)

- Internet usage (7.141, 7.230)
- Social media usage (7.160.3, 7.160.5)

Loneliness

- Feeling of loneliness (negative indicator) (10.150)

Cognitive resources and indicators (micro- and meso-scales)

Generalized trust & trust in others (criticality: high)

- Generalized trust (10.170)
- Trust in specific groups (10.470 — 2014 survey)
- Trust in people in locality (SC-IQ 2.2)

Trust in institutions & information sources (criticality: high)

- Trust in institutions (21.130)
- Trust in information sources (*to be developed*)

Sense of belonging

- Satisfaction with locality (3.120)
- Personal safety (3.170)

Positive outlook / life satisfaction

- Current life satisfaction (13.20, 13.40)
- Positive outlook (13.30, 13.50)
- Satisfaction with friendly relations (10.420 — 2014 survey)

Collective associational resources and indicators (meso-scale)

Associational activity (criticality: high)

- Voluntary activity; type of activity (12.20.1 — 12.51.1)
- Resources available in organizations (SC-IQ 1.8, 1.9)
- Diversity in organizations (SC-IQ 1.10 — 1.13)
- Organization goals (SC-IQ 1.17 — 1.21)
- Giving (12.80, 12.90, 12.100)

Organizational density (*to be developed*)

Access to services (*to be developed*)

Political efficacy (criticality: high)

- Neighborly relationships (3.80)
- Cooperation (3.100)
- Political engagement (21.55, 21.60)
- Ability to affect decision-making (21.230)

Macro-scale resources and indicators (macro-scale)

Participation (criticality: high)

- Public participation measures
- Voter participation (in local and general elections)
- Online proficiency

"Driver" economic sectors diversity (criticality: high)

Political extremism (*to be developed*)

Segregation / Inequality index

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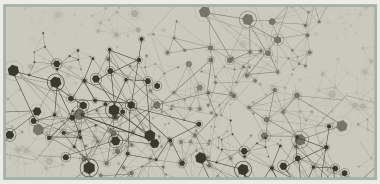

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