



# Garden time and market time: Finding seasonality in diverse food economies

Lucie Sovová<sup>a,\*</sup>,<sup>1</sup> Petr Jehlička<sup>b,2</sup>

<sup>a</sup> Rural Sociology Group, Wageningen University & Research, Hollandseweg 1, 6706 KN Wageningen, The Netherlands

<sup>b</sup> Department of Ecological Anthropology, Institute of Ethnology, Czech Academy of Sciences, Na Florenci 3, 110 00 Praha 1, Czechia

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## ABSTRACT

This paper combines two fast-developing perspectives on food provision: diverse economies and temporality. Building on an in-depth study of urban gardening in Czechia, we show that non-market economies play a central role in household food practices and that their specific temporality shapes how other parts of a household's diverse food economy are mobilised at certain times and for certain purposes. Following the diverse economies approach of reading for difference and not dominance, this paper investigates the interrelations and hierarchies among market, alternative market, and non-market food economies on the household level. We decentre the presumed dominance of market-based provisioning by showing that gardeners' food behaviours are crucially shaped by their engagement with food self-provisioning (FSP), which creates particular understandings of food quality. What is more, the cyclical, natural time of gardening seasons determines the social rhythm of food provisioning in a contemporary urban context. This provides a counter-narrative to the dominant account about the dislodging of cyclical time embedded in natural processes by modern, accelerated time, with the former carrying a lower value than the latter. Finally, we engage with temporality on a discursive level as we counterpose our case of traditional FSP against the fascination with novelty permeating much of the search for alternative foodways. With this, we contribute to the debate on the temporality underpinning the ideas of capitalist modernity as well as post-capitalist refiguration.

## 1. Introduction

This paper brings together two fast-developing bodies of literature: diverse (food) economies (Wilson, 2013; Cameron and Wright, 2014; Sarmiento, 2017; Rosol, 2020; Vincent and Feola, 2020) and temporality of food provisioning (Aistara, 2014; Mazac and Tuomisto, 2020; Taylor, 2018), which have, so far, developed largely in parallel rather than in dialogue. This is surprising given the increasing level of attention to food provisioning in the diverse economies scholarship (Čajka and Novotný, 2022; Gritzas and Kavoulakos, 2016) and the centrality of natural cycles and social rhythms to food provisioning.

In this paper, we address this lacuna and add a temporal dimension to the diverse economies scholarship by exploring interactions between diverse food economies on the household level. This endeavour provides insights concerning the hierarchy of food sources as understood by practitioners, and the role of time and seasonality as key ordering

elements of their food-related behaviours. To pursue this agenda, we draw empirically on an in-depth study of the practices of households engaged in urban gardening. The paper's key empirical finding is that the experience of food growing combined with the seasonality of this food source shapes the way other parts of a household's diverse food economy are mobilised at certain times and for certain purposes. This, in turn, advances a novel way of thinking about temporality in relation to diverse (food) economies.

Socio-economic relations have become an increasingly important consideration in research concerned with more environmentally sustainable and socially just ways of food provisioning (often labelled Alternative Food Networks or AFNs). Unlike industrial agriculture and corporate supply chains focused on food commodification and profit maximisation, promoters and practitioners of AFNs pursue a wider set of interrelated objectives that transcend profit. AFNs can foreground distinctive economic relations based on solidarity and the

\* Corresponding author.

E-mail addresses: [lucie.sovova@wur.nl](mailto:lucie.sovova@wur.nl) (L. Sovová), [jehlicka@eu.cas.cz](mailto:jehlicka@eu.cas.cz) (P. Jehlička).

<sup>1</sup> ORCID 0000-0003-2906-2144.

<sup>2</sup> ORCID 0000-0002-7602-7133.

acknowledgement of the often hidden social and environmental costs of food (Vincent and Feola, 2020). At the same time, these initiatives are intertwined in complex relations with the neoliberal economy (Arguelles et al., 2017; McClintock, 2014) as their practical functioning often relies on monetised, market-based transactions (Rosol, 2020; Wilson, 2013).

The diverse economies approach, based on the work of J. K. Gibson-Graham (2008), offers a useful tool for interrogating the economic diversity of food provisioning and can 'clarify the extent to which AFNs perform the economy otherwise' (Rosol, 2020, p. 68). Diverse economies scholars have explored food spaces that strive to operate in explicitly non-capitalist ways, such as food and land cooperatives (Rosol, 2020), public refrigerators (Morrow, 2019), kitchens preparing meals from food that would otherwise be wasted (Ulug and Trell, 2019; Wilson, 2013), community supported agriculture (CSA) schemes offering non-monetary payment options (Wilson, 2013), and initiatives reclaiming urban spaces as food commons (Morrow and Martin, 2019). Another stream of literature has documented food practices that do not explicitly aim to foster non-capitalist economies or alternative food systems, but that practically operate on the margins of the market domain and contribute to environmental and social sustainability, e.g., food sharing (Davies et al., 2017; Holmes, 2018) or food self-provisioning (FSP) (Kosnik, 2018; Mincyté et al., 2020). These everyday practices, previously conceptualised as 'quiet sustainability' (Smith and Jehlička, 2013) or 'quiet activism' (Pottinger, 2017), are the focus of this paper.

Scholarly engagements with these and similar everyday food practices allow 'unnoticed actors such as time to emerge' (Taylor, 2018, p. 291). Indeed, time is a key, yet often implicit dimension in the debates on diverse food economies (Vincent and Feola, 2020). On the one hand, the fast pace of Western modernity dictates the centrality of convenience in food provision: acquiring, preparing, and consuming food needs to fit consumers' busy lifestyles (Daniels and Glorieux, 2015; Jackson et al., 2006). Global food supply and just-in-time delivery models leave little room for the natural temporality of agricultural production (Bruce and Castellano, 2017). On the other hand, scholars have begun to recognise the distinctive temporalities of more sustainable ways of food production and consumption and explore (re)connections with nature's cyclical rhythms (Phillips, 2020; Schoneboom, 2013). Sustainable agriculture entails higher time investment in farming practices such as soil care, composting, or seed saving, which might not translate into short-term profits but can ensure long-term sustainability (Morrow and Davies, 2021; Pottinger, 2018; Puig de la Bellacasa, 2015). Seasonal and local diets exemplify the role of place and time in sustainable food consumption, which is most explicitly epitomised by the Slow Food movement (Murdoch and Miele, 2004). Last but not least, research has scrutinised the time and (often gendered) labour demands of more sustainable food provisioning (Parker and Morrow, 2017; Szabo, 2011), echoing debates on care and social reproduction long established in feminist scholarship (DeVault, 1991; Van Esterik, 1999).

Apart from this practical temporality embedded in the performances of sustainable food production and consumption, we notice a discursive, historical temporality concerned with change and continuity (Ingold, 1993). Through its predominantly Western provenance, the search for alternative foodways is implicitly grounded in the Euromodern time ontology and its linear ideas about progress. This locates the benefits of AFNs (whether in the form of environmental sustainability or social wellbeing) in an unspecified, more or less distant future, emphasising the innovativeness of these initiatives (Schmid and Taylor Aiken, 2023). Such future-oriented hope underpins the logic of prefiguration (Tornaghi and Dehaene, 2020; Zanon, 2020) metaphorically summarised as 'sowing the seeds' of more inclusive and sustainable futures (Pottinger, 2017; Smith, 2019; our quotation marks).

Simultaneously, food provisioning practices associated with more sustainable lifestyles, such as gardening, foraging, food sharing, preserving, and cooking from scratch, can draw on past-oriented time

ontologies. These can manifest themselves in nostalgic and romanticising 'back-to-the-land' sentiments (such as Michael Pollan's [2009, p. 148] plea not to eat 'anything your great grandmother wouldn't recognise as food'). In other cases, association with the past has been used to delegitimise traditional food practices as backwards and residual. Such negative framings have pervaded early accounts of FSP and other non-market food economies in Central and Eastern Europe. These practices were discursively associated with the failed socialist regime,<sup>3</sup> and expected to disappear with the development of the market economy (Daněk et al., 2022). However, these expectations grounded in the linear temporality of modernisation have been countered by the continuous relevance of these practices throughout the region's economic transformations (Jehlička et al., 2013; Pungas, 2019). These examples show that the position of food practices in historical time is part of the process of their valuation (Heuts and Mol, 2013).

This paper addresses both the practical and the discursive temporality of diverse food economies. Drawing on research on FSP in Brno, Czechia, we advance three arguments. First, we underline the importance of engaging, as scholars, with already existing and traditionally established forms of food provisioning, to balance the search for novel solutions which hold an (uncertain) promise of a future food alternative (Schmid and Taylor Aiken, 2023). Second, by taking seriously Gibson-Graham's (2008) invitation to read for difference and not dominance, we explore the interrelations and hierarchies among market, alternative market, and non-market food economies on the household level. To decentre the perceived hegemony of market-based provisioning, we take the non-market practice of FSP as a starting point for our research. Third, we view the seasonal rhythms of gardening as a driving force shaping household food practices far beyond the space of the garden and the growing season.

## 2. Reading food economies for difference

The search for more sustainable foodways has found useful grounding in Gibson-Graham's (2008) diverse economies theory, which problematises the hegemony of capitalism as the dominant economic form and instead makes visible other, co-existing economic forms. In their famous iceberg metaphor, Gibson-Graham (2006) map economic diversity on a spectrum depicting (i) the market-based capitalist economy characterised by profit-oriented enterprise and wage labour as the tip of the iceberg, with a plethora of (ii) alternative market, labour, and enterprise arrangements, and (iii) non-market economic practices located in the larger, submerged part of the iceberg.

What seems to be particularly inspiring in the diverse economies' conceptual toolkit is Gibson-Graham's invitation to read for 'difference and possibility rather than dominance and predictability' (Gibson-Graham's, 2008, p. 626). In other words, to explore the existing economic diversity without assuming the dominant position of capitalism. This analytical move 'enables researchers to avoid approaching AFNs as the quixotic, vestigial, or doomed other to conventional, i.e., capitalist food systems understood as monolithic and singular' (Sarmiento, 2017, p. 488). Indeed, the diverse economies theory presents a useful vantage point for the search for more sustainable food systems, as was recently highlighted by Marit Rosol (2020) and Olga Vincent and Giuseppe Feola (2020), and anticipated in earlier works (Cameron and Wright, 2014; Lee, 2006; Sarmiento, 2017; Wilson, 2013).

This critical economic lens is relevant in two ways. First, the industrial food system, which many AFNs seek to challenge, is closely intertwined with capitalism (Vincent and Feola, 2020). The high productivity model of the corporate-environmental food regime (Friedmann, 2005) not only reflects a profit and growth-oriented logic of capital

<sup>3</sup> The history of FSP predates state socialism, with first allotment gardens being established in relation to early 20th century urbanisation. For a more detailed history of FSP in Czechia see Daněk and Jehlička (2024).

accumulation, but it also sustains the capitalist economy (Weis, 2010). Second, perhaps due to the fundamental role of agriculture in social reproduction, the agrifood sector presents fertile ground for ‘testing new ways of performing the economy otherwise’ (Rosol, 2020, p. 55). Indeed, food is produced, distributed, and consumed in multiple ways, involving diverse forms of labour, markets, enterprises, property, and finance, whose relation to the corporate agrifood system cannot be presumed (Cameron and Wright, 2014).

As a result, AFNs present a productive empirical field for the development of the diverse economies theory, particularly concerning its engagement with materiality. As pointed out by Eric Sarmiento, one of the common critiques of the diverse economies scholarship is its emphasis on the performativity of discourse, which ‘has long struck sceptical observers as overly abstract and logocentric’ (Sarmiento, 2017, p. 489). This issue appears to be less prominent in diverse economies research on AFNs, which is typically ‘quite pragmatic and grounded’ (ibid.). To confirm, our take on diverse economies in this paper centres on how they *materialise* in everyday food provisioning practices (Holmes, 2018). Focusing on the material, i.e. food acquired by households from different sources, allows us to understand the importance of diverse food economies in both quantitative and qualitative terms.

Much of what we call ‘diverse food economies scholarship’ (i.e., research applying the diverse economies theory to alternative ways of food provision) focuses on post-capitalist prefiguration (Chatterton, 2016; Zanoni, 2020), that is, experiments that seek to embody a distinctive, post-capitalist form of economy. In this explorative, possibility-oriented fashion, the purpose of AFNs is not necessarily to solve questions of food provision at once. Instead, they identify possible pieces of future solutions (Sarmiento, 2017; Tornaghi and Dehaene, 2020), often in the form of socially innovative reconfigurations of producer–consumer relations.

In this project, post-capitalism is not understood in a temporal sense, as another stage following capitalism in the linear trajectory of development. Instead, Tuomo Alhojärvi and colleagues (2023) highlight post-capitalist politics as an ongoing practice of visibilising other than capitalist forms of economy that already exist. To make the departure from a developmentalist understanding of time even more explicit, we argue, scholarship on diverse food economies can find inspiration in traditional ways of food provision (see, e.g. Cameron and Wright, 2014 account of the diverse economies surrounding subsistence farming in the Majority World). Inspired by the assertion that ‘[s]ustainable food systems have already been in practice for millennia’ (Mazac and Tuomisto, 2020, p. 4), this paper focuses on practices which operate outside the market without explicitly opposing the capitalist food system. Including traditional practices in post-capitalist prefiguration allows us to explore the often implied but rarely addressed temporal dimension of economic diversity, while further questioning the centrality of capitalism and the Euromodern temporality.

### 3. Diverse temporalities of the food economy

The discursive intertwinements of capitalism with modernity and progress suggest that temporality is an important, albeit rarely explicit, dimension of economic diversity. Temporality scholars have linked the understanding of time as linear, teleological and quantifiable to processes of capitalist production and Western colonialism (Valkenburg, 2022, Hunfeld, 2022). This temporal ontology displaces alternative

understandings of time, much like the discourse of capitalist dominance overlooks the submerged part of Gibson-Graham’s iceberg. Indeed, diverse economies theory aligns with postdevelopment scholarship in its scepticism of linear narratives of progress (Gibson-Graham, 2005): economic diversity implies a diversity of temporalities. That said, the literature directly engaging with the temporality of diverse economies is, to our knowledge, fairly limited.<sup>4</sup>

Addressing this issue head-on, Vincent and Feola (2020) propose a more explicit questioning of temporality as an ontological dimension of economic diversity. While their argument aims at a broader applicability, we find the question of time particularly pertinent to food economies. Food production is not divorced from the vagaries of biology, ecology, and climate, which are typically characterised by the cyclical time of circadian and seasonal rhythms (Goodman, 1999) – or what we will call ‘garden time’. Nevertheless, the industrialisation of food production, distribution, and consumption seeks to align these processes with the ‘predictable, homogenous and linear representations of time’ (Vincent and Feola, 2020, p. 305) typical for Western modernity. The use of refrigeration, preservation, and packaging, as well as globalised retail alternating geographical regions, mould the organic and often uncertain temporalities of food into the streamlined temporality of industrial capitalism, which we refer to as ‘market time’. The uninhibited growth dictated by the capitalist economy is made possible by a ‘conspicuously short-sighted’ time ontology and a ‘disregard for future temporalities’ (Mazac and Tuomisto, 2020, p. 6), as this ‘spatio-temporal rescaling of production’ generates metabolic imbalances in other places and times (Pungas, 2019, p. 78).

Considering the temporality of alternative food markets evokes a greater complexity. Alternative forms of food provision may often relate to a contrasting time ontology: ‘relational’, slowed down, and rejecting the acceleration of everyday practices (Vincent and Feola, 2020). However, when AFNs compete on capitalist markets, marketing, distribution, and consumption of produce often come close to the accelerated temporality underpinning the market economy. For instance, Jane Dixon et al.’s (2007) research from Australia shows that ‘slow’ (i.e., higher quality and higher environmental standards) foods are often only accessible by car (arguably a ‘fast’ mode of transportation) and cater for convenient consumption, whereas many fast food options are accessible to pedestrians and feature sit-in dining areas. This leads to contradictions and hybridities the authors refer to as ‘slow food fast’ and ‘fast food slow’ (Dixon et al., 2007, p. 138).

The non-market part of the diverse food economy, represented by practices such as gardening (Bhatti et al., 2009; Schoneboom, 2013; Taylor, 2018), gifting, gleanings, and foraging (Gibson-Graham, 2006), often embodies qualities such as deceleration, continuity, cyclicity, and repetition. In contrast to the ‘valorisation of speed’ (Adam, 1998, in Taylor, 2018, p. 296) and erasure of seasonality typical for the ‘market time’ of the industrial food supply, ‘garden time’ is characterised by the centrality of seasonality, the rhythms of sunrise and sunset, cycles of growth, and the impossibility of fundamentally accelerating tasks of caring for plants and soil (Taylor, 2018).

Historically, the dominant scholarly (but also public) discourse on the development of time has been that of nature-related, cyclical time being displaced by linear, Euromodern industrial/clock time (Taylor, 2018). The intensification and acceleration of modern time relate to the development of capitalism (Castells, 1996; Castree, 2009) and the colonial displacement of indigenous temporalities (Hunfeld, 2022; Valkenburg, 2022). Specifically in the food regime studies, this

<sup>4</sup> The Handbook of Diverse Economies (Gibson-Graham & Dombroski, 2020) includes several cursory mentions of temporality in terms of reciprocity and finance, food-related slowness and the slower pace of labour in the anti-mafia enterprise. Otherwise, temporal notions are absent from the Handbook which, with 58 chapters and 546 pages, presents the gamut of current debates within the diverse economies scholarship.

discourse is echoed in suggestions about industrial agriculture privileging ‘circulation time of commodity over natural reproduction time’ (McMichael, 2015, p. 307). Unsurprisingly, the concern about uniform, linear quantitative and accelerated clock time replacing ‘the heterogeneous patterns of traditional agricultural work entrained to nature’s diverse rhythms’ or ‘cyclic-qualitative’ time (Taylor, 2018, p. 295) is also echoed in studies of (allotment) gardening (Schoneboom, 2013; Taylor, 2018).

Alongside these accounts, other scholars have problematised the notion of a straightforward substitution of cyclical time with linear time, pointing out the coexistence of alternative time ontologies. Apart from the diverse temporalities embedded in indigenous ways of knowing and being, Govert Valkenburg (2022) refers to the continued existence of a diversity of temporalities even in Western societies. For instance, performance, ritual and learning inevitably rely on repetition, pointing to the relevance of a circular notion of time. Rhythm, sequencing and temporal ordering have received attention in scholarship examining consumption as a social practice (Southerton, 2013), where food practices in particular seem to demand specific temporal conditions in terms of coordination, timing, tempo and duration. Encounters with more-than-human actors serve as another reminder of coexisting temporalities (Gibson and Warren, 2020; Phillips, 2020).

As a result, people navigate multiple temporalities in their daily lives (Valkenburg, 2022), as is also illustrated in Abigail Schooneboom’s (2018) ethnography of allotment gardening and its temporal intersections with the pace of modern (work) life. On the one hand, the time requirements of gardening have been documented as a barrier, particularly for the younger generation (Mincyté et al., 2020; Pungas, 2023). On the other hand, though, ‘the texture of time spent at the allotment’ (Schoneboom, 2018, p. 361) seems fundamentally different, as they create ‘non-obligated time’ (ibid.) spent in the flow of gardening tasks and contemplation.

In this paper, we use the specific temporality of gardening as a starting point from which we add to the literature that problematises the narrative of Euromodern linear time eclipsing ‘traditional’, cyclical, and nature-related time. Our contribution to this scholarship focuses on gardens as sources of food and thus spaces which exist within, and interact with, the diverse food economy. The temporal lens adds another dimension to the diverse economies as a performative epistemological and ontological project. If perpetuating the hegemonic position of the modernist time leads to a delegitimisation of other temporalities (Hunfeld, 2022; Valkenburg, 2022), highlighting the coexistence and interactions of concomitant diverse temporalities has the opposite effect. It decentres the ‘market time’ in the same way as visibilising economic diversity decentres capitalism.

#### 4. Methodology

This paper draws empirically on a qualitative study conducted in cooperation with 27 households<sup>5</sup> involved in FSP in Brno, Czechia’s second largest city.<sup>6</sup> The sample included households that were not professional farmers but produced food for their own consumption in a garden adjacent to their home, on an allotment plot, or in a second-home garden. The size of the plots ranged from 200 to 2,000 m<sup>2</sup> with diverse intensities of production. All households produced fruits and vegetables, which were the focus of our analysis and an inclusion criterion during the recruitment of participants. In addition, two gardeners kept bees, six had chickens for eggs, and two kept rabbits for meat. Households ranged from one to five people,<sup>7</sup> and most were represented by a female

<sup>5</sup> For the sake of anonymity, we refer to them as respondents 1–28. One of the households dropped out during the data collection.

<sup>6</sup> Population 400,000.

<sup>7</sup> Data reported below relates to the households (irrespective of their size) unless stated otherwise.

respondent, arguably due to the gendered nature of food provisioning work. The sampling aimed for diversity in terms of age and socio-economic status; however, respondents with university degrees were overrepresented.<sup>8</sup>

The goal of the research was to inventorise the diverse economies in which participants engage in order to acquire fruits and vegetables, and to understand their mutual interactions. To this end, participants were asked to record all fruits and vegetables that entered their household and their respective sources, (estimated) weight, and usage (see also Pourais et al., 2015 for a similar methodology). Using Gibson-Graham’s (2006) diverse economies matrix, food sources were subsequently categorised as non-market (gardening, foraging, gifts), alternative market (farmers’ markets, direct sales, and organic food shops), and market-based (supermarkets and grocery shops).<sup>9</sup> The same analytical lens was applied to the food that households distributed. Here, only non-market transactions (sharing, gifting, or exchange) were reported in the overwhelming majority of cases, as only one respondent sold small quantities of their produce. In addition, food usage included the categories of consumption, preserving, and storing for future use.

Assuming that seasonality would influence the use of the gardens as food sources, we structured the data collection in four rounds spread throughout the seasons of the year. In each season, participants kept food logs for a period of one month.<sup>10</sup> Food logs were accompanied by four to six semi-structured interviews per respondent. An introductory interview mapped their gardening practices and motivations as well as the practicalities of their household food provision. Subsequent interviews were held at each seasonal round of data collection and served to test emerging interpretations, clarify ambiguities in the food logs<sup>11</sup> and retain participants’ commitment. The concluding interview reviewed the developments of respondents’ food provisioning practices throughout the year and verified the interpretation of seasonal patterns.

The food logs provided a detailed insight into households’ food provisioning strategies. These data offered a quantitative account of the material volume of diverse food economies at the household level, illuminating the much-debated question of the relevance and scale of non-market forms of food provision. Nonetheless, our research remains qualitative in nature, aiming to understand participants’ motivations for the use of particular food sources and the practicalities of food provisioning in daily life. In our results, we thus build from the quantitative evidence provided by the food logs to a more qualitative interpretation based on insights from the interviews.

#### 5. Results

This section discusses the role of temporal rhythms in the diverse

<sup>8</sup> Previous representative surveys have showed that FSP is practiced across social classes and income groups in Czechia (Jehlička et al., 2019).

<sup>9</sup> This simplified categorisation is mostly based on the prevalent types of transactions, and we are aware that it does not fully capture the diverse economic relations fostered by each type of source (see Sovová, 2020 for a more elaborate discussion). Other studies (Holmes, 2018; Morrow, 2020; Rosol, 2020; Wilson, 2013) provide greater nuance by unpacking economic practices in terms of labour, property, finance, and organisational layout. In comparison, our goal is not to deliver a granular analysis of different food economies, but instead to investigate their interactions on the household level – for which a somewhat coarser application of Gibson-Graham’s categories serves well.

<sup>10</sup> Importantly, all data concerning food weight, source, and usage reported below relate to these four month-long periods only, not to the whole year.

<sup>11</sup> While food logs rely on respondents’ self-reporting, we believe that they provide for a more accurate data than memory recall often used in consumer studies. The main challenges experienced during data collection related to respondents’ ability to estimate food quantities and to the sometimes blurry boundaries between different types of sources (e.g. gifting vs. buying from an acquaintance for a reduced price) and uses (e.g. own consumption vs. sharing in cases of closely related households) of food (see Sovová, 2020 for details).

economies of gardeners' households. Before that, however, we need to provide a brief inventory of the food sources households used, qualifying them as representing diverse food economies (section 5.1). This overview is accompanied by several important notes on the meanings respondents associated with different types of sources (section 5.2). Finally, we draw out several arguments about the temporality of diverse food economies (section 5.1-5.3).

### 5.1. Diverse household food economies

Gardening households mobilise several approaches to obtaining fruits and vegetables that relate to the three types of transactions in the diverse economies matrix (Gibson-Graham, 2006). Table 1 captures the types of sources households used during the four months of data collection. Market-based sources were most important, with supermarkets covering on average 43% of household consumption of fruits and vegetables. Nonetheless, the food logs also revealed the importance of acquiring fruits and vegetables outside the market, i.e. through FSP and gifting. On average, 31% of respondents' consumption was covered from their own gardens.

Alternative market sources were comparatively less significant, accounting for 14% of the household fruit and vegetable consumption on average. The prevalence of more novel forms of AFNs, such as organic food shops or farmers' markets, was particularly low. The most significant alternative market source was direct sales, i.e. instances when respondents purchased food directly from producers. We note that these sources were often embedded in specific places and/or social relations, e.g. when respondents combined visiting relatives in the countryside with buying fruits and vegetables, or when those living on the city's outskirts purchased food from nearby farms. The relations and meanings underpinning different types of food sources are further discussed in the next section.

### 5.2. Hierarchy of food sources

Previous research from Central and Eastern Europe has detailed the high appreciation for home-grown and home-made food in the region. This literature (e.g. Decker, 2018; Pungas, 2019; Trenouth and Tisenkopfs, 2015; Yotova, 2018) has unpacked a complex notion of food quality in which home-grown food is valued for its transparent origin and 'natural' production methods, resulting in a superior taste, healthiness and freshness. Our research confirms that these meanings are closely intertwined, and it relates them directly to respondents' embodied experience with food growing:

I think that home-grown [food] is definitely of higher quality. For instance, I don't use many chemicals. Other people may use chemicals in their gardens, and they have more beautiful, bigger vegetables. But is it better taste- or health-wise? I have seen how tomatoes are grown in Turkey, in those fields of polytunnels. Well, they're red, but they don't have any flavour. Or if I buy strawberries now [in winter], they taste like beetroot. A strawberry, when you pick it in the garden, the sun is shining on it and it's warm; you don't get that taste even if you buy it on the market from a farmer, but if you have it warm, freshly picked, that's something exquisite. And that's exactly why I do it. (respondent 15)

Furthermore, our results resonate with existing scholarship from the region (e.g. Bilewicz and Śpiewak, 2019; Blumberg, 2014; Gabriel, 2005; Mincyte, 2014), which shows a preference for socially based guarantees of quality over more formalised ones. When discussing farmers' markets, respondent 10 explained:

One anyway doesn't know where it [i.e., food] comes from [at the farmers' market]. I don't really have trust in it. I prefer to get something from an acquaintance, although I know that they can also use something [i.e., agrochemicals], or I don't know exactly. I don't

dig into it, but I know that there is a person behind it, so I have more trust in it.

In summary, respondents' understanding of food quality related directly to their proximity to the food production. They valued their own produce for 'knowing exactly what they put in it' and they also had trust in the quality of food produced by people they personally knew, while being suspicious of longer and less transparent supply chains. Notably, food purchased in supermarkets was understood as having lower quality, and commonly described as 'chemical' and 'tasteless'.

This results in a clear hierarchy of food sources which positions non-market food practices above market-based provisioning. Indeed, purchasing food from market-based sources was framed explicitly as a last resort:

I don't necessarily need to grow everything; you can always exchange [food] with someone, or in the worst case, you buy it. (respondent 10)

Juxtaposing these understandings of food quality to the food log data shows that non-market food provision is not only quantitatively relevant, but also perceived as the source of the best food. This challenges earlier literature which assumed that non-market food economies in Central and Eastern Europe would be replaced by commercial retail as the region's economic transformation advances on the linear development trajectory towards capitalism (Daněk et al., 2022).

However, respondents' perception of market-based sources seemed at odds with the purchases of fruits and vegetables in supermarkets. Even though market sources were framed as the worst in terms of food quality, they still provided most of the fruits and vegetables consumed. The next section unpacks this paradox by examining the temporality of households' diverse food economies.

### 5.3. The time of good food

The starting point of our argument regarding temporality consists of two premises. First, homegrown food is perceived as the best and, by extension, non-market sources are preferred over market-based food provision. Second, gardening is a seasonal practice, and non-market and alternative market food sources are generally subject to higher seasonal fluctuation than the globalised, market-based food supply. While these assertions might seem trivial, investigating their consequences for household food economies allows us to confirm the central position of non-market food sources, while highlighting the importance of seasonality in the interactions of diverse food economies. Furthermore, we use this point to illustrate the steadfast influence of natural rhythms on the daily lives of urban professionals living in an industrialised country, thus disputing the assumed dominance of the accelerated linear time of capitalist modernity.

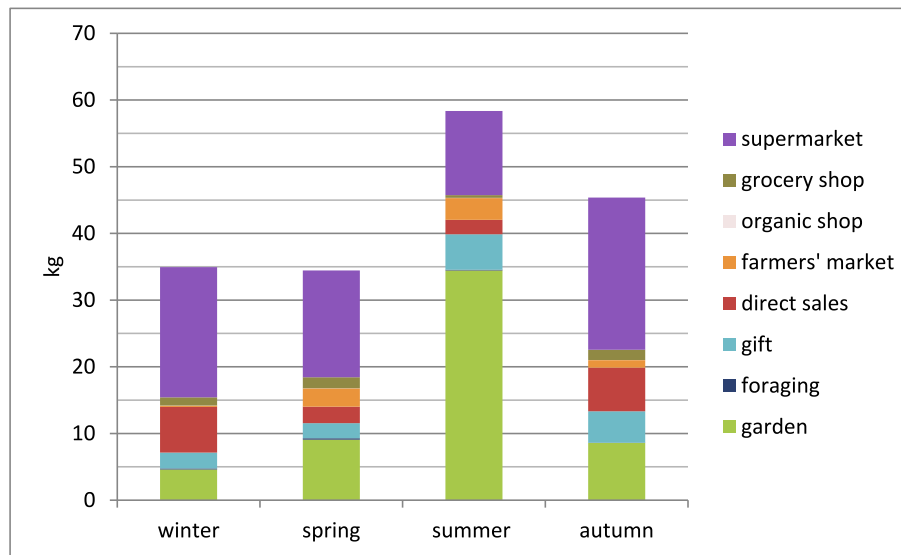
The organisation of the data collection into four rounds spread throughout the year allowed us to observe seasonal patterns in respondents' food provisioning practices as well as their household diets. Unsurprisingly, the gardens played a major role during the summer season, as shown in Fig. 1. During this time, respondents purchased fewer fruits and vegetables, while their consumption of these foods increased.<sup>12</sup> On average, respondents covered 56 per cent of their fruit and vegetable consumption from their own production.<sup>13</sup> We also want to highlight that the amount of food harvested from the gardens

<sup>12</sup> During the summer month of data collection, respondents consumed an average 28 kg of produce per person, compared to 19 kg in the spring, autumn and winter rounds.

<sup>13</sup> In comparison, the gardens covered 26% of household consumption in the spring, 18% in autumn and 12% in the winter round of data collection.

**Table 1**  
Sources of fruits and vegetables consumed in respondent households during the data collection periods.

	non-market sources			alternative market sources			market sources	
	garden	foraging	gift	direct sales	farmers' market	organic food shop	grocery shop	supermarket
average kg	56.5	0.5	14.6	18.5	6.5	0.1	4.8	70.3
average %	31.4	0.2	8.3	9.6	4.8	0	2.7	43
average % per category	39.9			14.4			45.7	



**Fig. 1.** Average household consumption of fruits and vegetables from diverse sources according to the season. Data excludes food that was gifted, preserved and stored.

exceeded respondents' consumption. An average household shared and gifted 19 kg of home-grown food,<sup>14</sup> and preserved or stored another 20 kg. The garden harvest dominated respondents' diets not only in terms of the amount, but also the types of fruits and vegetables consumed. The most consumed vegetables (tomatoes, cucumbers, pumpkins, and zucchini) and fruits (apples, peaches, and grapes) were sourced almost exclusively from respondents' gardens.

Observing food provisioning patterns outside the summer abundance sheds light on the interactions of diverse food economies in respondents' households. We notice three coexisting patterns that illuminate the tension between the negative perception of market-based food sources and their continuous use. First, there is a clear increase in supermarket purchases in the autumn and winter rounds of data collection. This is explained as a way to supplement household needs after the (preferred) home-grown produce ceases to be available:

I cook vegetables a lot. Now [in winter] I buy frozen mixes, for instance, green peas and carrots, and I buy lettuce and Chinese cabbage because I don't have that from the garden now, so I need to buy it. (respondent 22)

Second, respondents developed numerous strategies to minimise the use of market-based food sources, which they associated with lower food quality. These crucially included preserving and storing foods from their own gardens or other non-market and alternative market sources:

Even in winter, we didn't buy vegetables at all. We had some pickled beetroot of our own. I also fermented cabbage, some of my own and some I bought from a farmer. I have dried mushrooms, so [we eat]

everything with mushrooms, the last of the pumpkins, lots of potatoes, rice, lentils. (respondent 10)

The increase of direct sales in the autumn and winter rounds of data collection, as shown in Fig. 1, reflects bulk on-farm purchases intended to cover household consumption of more durable produce (most notably apples and potatoes) throughout the winter. Storing was importantly conditioned by the infrastructures available to individual households, inviting creative solutions but also shaping respondents' gardening choices:

My parents have a really good cellar, where potatoes, beetroots and carrots and everything last easily until April. They store whatever they can. At our place, it wouldn't be possible. We have this city-type cellar. It's not cold, and the humidity is also not good. So, they store it there, and then we bring it by five kilos. (respondent 9)

I try to grow things that can be stored. What cannot be stored, I only try to produce in quantities I can give away. For instance, when I plant new trees, I look at the durability of the fruits. (respondent 17)

These examples illustrate how FSP (but also other food sources) and eating are intertwined across long-term temporal scales. The fact that future harvests are envisioned months in advance during sowing and planting is intrinsic to the temporality of gardening. Storing and preserving practices stretch this time-scale even further, often exceeding the span of a year:

I regularly sow spinach in autumn; in the spring it sprouts by itself. It is low maintenance, but it is, for instance, five big boxes at once. So I keep some and I quickly distribute the rest to relatives, who process it for themselves. (...) It's basically spinach for the whole year. I freeze a lot of it. (respondent 17)

Such long-term planning contrasts sharply with the notion of fast

<sup>14</sup> While we lack space in this paper to elaborate on the extensive networks of gifting and sharing, they add to the importance of non-market food provision by enhancing social resilience (Jehlička et al., 2019; Sovová et al., 2021).

food and the just-in-time delivery models of market-based provision. However, similar practices were routinised among gardeners, who developed them by trial and error over the years. Because of this, some respondents maintained a high level of self-sufficiency throughout the year, temporarily redistributing surplus produce from more plentiful seasons. In their food logs, stocks and preserves from past harvests overlapped with early crops of the new season, highlighting the cyclical nature of their food provisioning practices. For others, home-grown food was saved for special occasions, e.g. when respondent 25 made red currant jam for Christmas sweets and respondent 24 kept spinach in the freezer for next season's Easter stuffing.

Preserving and storing foods from 'good sources' thus enabled respondents to maintain their standards for good food, while additional purchases of fruits and vegetables in supermarkets ensured that their dietary needs were met. That said, the overall consumption of fruits and vegetables decreased, particularly in the winter and spring rounds of data collection, following the declining seasonal availability of (stored) home-grown food. The following quote by respondent 7 confirms that this adjustment results from the hierarchy of sources by food quality:

I find it somehow logical, when it's not there in the winter, why would I buy it in the supermarket? For instance, tomatoes and cucumbers, why would I eat them and buy them when they are not tasty?

This brings us to the third pattern, namely the influence of garden seasonality on the composition of respondents' diets. Despite the diversity in food preferences among respondents' households, the food log data reveals shared seasonal patterns in their fruit and vegetable consumption. Most notably, the consumption of particular crops declined once they stopped being available from the preferred sources. The aforementioned tomatoes are the most prominent example of this pattern: they were produced by all respondents, and were also often mentioned as a marker of difference in taste between home-grown and shop-bought food. Food logs confirmed high consumption of tomatoes, which was, however, limited almost exclusively to the time when they were available from the gardens. Although supermarkets offer tomatoes year-round, these do not meet the quality standards expected by gardeners.<sup>15</sup>

The seasonal eating pattern can thus be traced back to a preference for home-grown food. Fig. 2 illustrates similar fluctuations in consumption of several crops, which relate directly to their harvest time and shelf life: while strawberries, lettuce, zucchinis and tomatoes were eaten almost exclusively during, respectively, spring and summer, stored pumpkins and potatoes lasted until the autumn and winter rounds of data collection. The majority of these crops was obtained from respondents' own gardens, gifts and direct sales, and respondents preferred reducing their consumption over obtaining them from 'lower quality' market-based sources.

Such seasonal fluctuations were not observed in the consumption of crops that were commonly obtained from market-based sources. These crops were usually perceived as difficult to grow (e.g. carrots, cabbage) or easy to buy in good quality (e.g. onions). While the consumption of these foods remains comparatively more stable, some of the respondents' accounts suggest a ripple effect of the garden rhythms. For instance, multiple respondents explained the summer peak in their consumption of (mostly shop-bought) onions by the need to use more onions for meals and preserves made with garden vegetables. Carrots and cabbage were consumed slightly more in autumn and winter, possibly also to compensate for the lack of other vegetables from the gardens. It thus appears that the seasonal availability of food from gardens drives changes in consumption, which also extend to foods from

other sources and beyond the harvest period. In fact, the connection between perceived food quality, preference for non-market sources, and their seasonality makes for the strongest determinant of respondents' eating practices.

## 6. Discussion

In light of our findings, in this section, we revisit the three arguments formulated in the Introduction. The first one relates to temporal discourses and the importance of engaging with the traditionally established forms of food provisioning which exist in parallel – though not necessarily in opposition – to market-based provision. These forms are underrepresented in studies of diverse food economies, which often focus on novel initiatives that seek more explicitly to overcome the limitations of the capitalist food system. As [Benedikt Schmid and Gerald Taylor-Aiken \(2023, p. 511\)](#) point out, the dominant emphasis on novelty has a dual effect – the 'displacement from the present' that leads to ignoring 'practices that already exist' and the implicit prioritisation of the future as the location of 'new and hopeful practices'.

This perspective is visible in literature describing the slow proliferation of 'novel' AFNs such as community-supported agriculture, farmers' markets or organic food shops in Central and Eastern Europe ([Spilková, 2018](#)), which our results indeed confirm. At the same time, we observe the existence of direct producer–consumer arrangements that are not driven by innovation but grounded in social relations and connections to place, and which others have similarly described as traditional ([Tisenkopfs, 2017](#)) or embedded ([Goszczyński et al., 2019](#)) food networks.

Zooming in on literature on urban food gardening, we notice an implicit, yet entrenched, temporality-based valuation, which positions 'innovative' AFNs (such as rooftop or community gardening projects) as distinctive from 'traditional' allotment and home gardening. The former type is typically represented through a rhetoric of emergence and novelty, which emphasises potential for future transformation (often pending questions about upscaling and economic viability; [Schmid and Taylor Aiken, 2023](#)). In this manner, the search for alternative food practices remains firmly embedded in the linear Euromodern time ontology ([Vincent and Feola, 2020](#)) and its ideas of progress.

Traditional forms of FSP in allotment and home gardens have been associated with temporality in a different manner, one that is, nevertheless, also related to linearity and modernisation. For a long time, rather than being framed as part of future-oriented, progressive developments, allotment and home gardening have been associated with a past-oriented temporality and primarily understood as a manifestation of backwardness ([Daněk et al., 2022](#); [Pungas et al., 2022](#); [Smith and Jehlička, 2013](#)). This can be viewed as a specific variant of the 'denial of coevalness' ([Fabian, 2014](#)), a situation in which a culture or community – in this case, a social group of home and allotment gardeners – is epistemologically marginalised ([Valkenburg, 2022](#)) on the basis of being seen as not sharing 'our' time. Conversely, acknowledging diversity in practices and their respective temporalities allows for their contemporaneous coexistence. Engaging with traditional forms of food provision thus expands the space of possibility for more equitable food economies. Furthermore, paying attention to temporal discourses adds an important dimension to the inventory of economic diversity as it helps shed light on practices that might be unrightfully overlooked due to their association with the past ([Sovová, Cima et al., forthcoming](#)).

This relates to our second argument, which concerns reading for difference and hence not making assumptions on the interrelations and hierarchies among diverse food economies. Engaging with traditional forms of FSP in Central and Eastern Europe shows the relevance of non-market food economies which exist alongside the wide availability of cheap and convenient foods and the region's broader transformations towards neoliberal capitalism. Our results reveal that direct and embodied experiences with food production shape gardeners' understandings of food quality, according to which the best food can be

<sup>15</sup> We could argue, following [Heuts and Mol \(2013\)](#), that the experience of tomato growing not only educated gardeners in recognizing a good tomato, but it was in fact an intrinsic part of actively performing tomatoes as good.

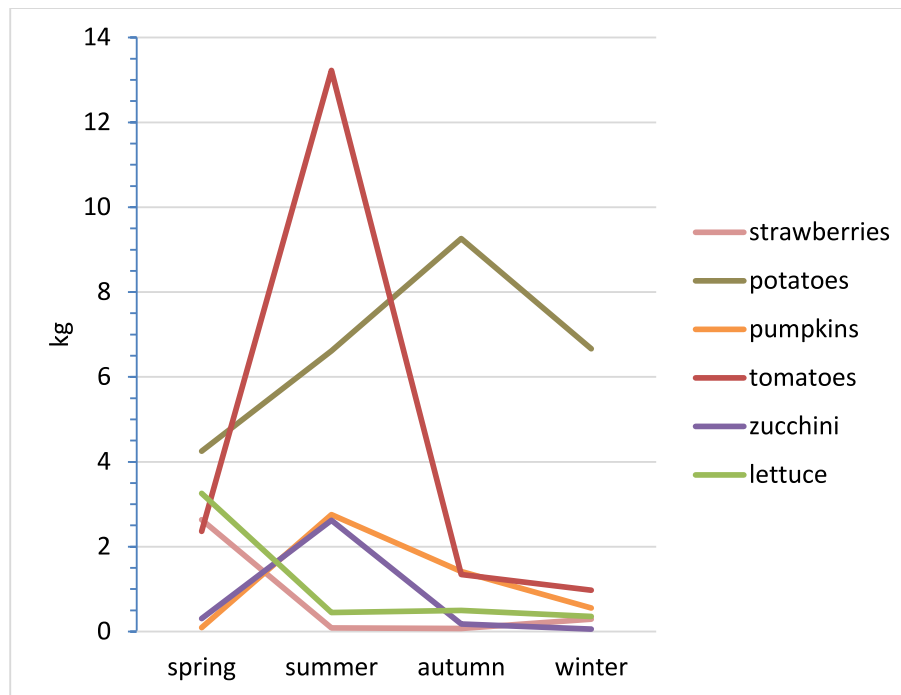


Fig. 2. Average household consumption of crops with seasonal fluctuation.

obtained from sources which operate outside, or on the margins of, the market economy: FSP, gifts, or direct sales based on personal contacts.

Although our research is based on a small sample of 27 households, there is robust evidence of the widespread prevalence of FSP in Central and Eastern Europe: the share of the population growing some of their own food is 51 per cent in Czechia (Smutna et al., 2024), 36 per cent in Hungary (Balazs, 2016), 50 per cent in Croatia (Jehlička et al., 2021) and 54 per cent in Poland (Smith and Jehlička, 2013). Across these studies, participants from diverse socio-economic groups value gardening as a meaningful hobby, but also as a source of food of the highest quality. This source also feeds (literally and figuratively) vibrant networks of gifts and sharing, extending the relevance of home-grown produce beyond gardening households (Jehlička and Daněk, 2017). Given the number of practitioners involved and the quantity of food produced, FSP is far from a niche practice: the patterns observed in our research are likely to shape the broader food system in the region. In that sense, our insights into the relation of FSP to other food sources present a crucial addition to existing research on this practice.

Our third argument relates the hierarchy of diverse food economies to their diverse temporalities. In advancing this idea, we draw on Philip McMichael's (2015) conflation of temporality and value. We show that the cyclic-qualitative time determined by gardening rhythms is associated with a higher value. As a consequence, it structures the gardeners' practices in the other two – market and alternative market – segments of diverse food economies. The participants in our research were not striving for self-sufficiency for the sake of being independent from the market or the industrial food system. Instead, their ambition was to provide their households with good-quality food. As a result, they still shopped for part of their fruits and vegetables in supermarkets, particularly in seasons when food from the preferred sources was unavailable.

At the same time, they applied multiple strategies to minimise their reliance on conventional markets, which they associated with lower food quality. The seasonal patterns we discovered in respondents' food sources and diets are particularly remarkable considering that diverse types of fruits and vegetables were available (and affordable) to them throughout the year. Despite that, their fruit and vegetable consumption<sup>16</sup> was crucially shaped by the 'garden time' of non-market food sources.

Existing research points to a congruence between economic relations and temporal ontologies (Vincent and Feola, 2020): the accelerated and linear 'market time' pertaining to the capitalist agro-industry contrasts with the slower and cyclical 'garden time' of non-market food economies. Confirming this, our case challenges the often presumed relations of dominance on both levels: it contests the assumption about FSP being replaced by market-based food provision, and with that also the discourse of 'market time' overruling 'garden time'. We thus confirm the relevance of temporality for deepening the analysis of economic diversity, and we highlight the role of seasonality as an important point of attention for research on diverse food economies and their mutual interactions.

## 7. Conclusion

Current debates on food and agriculture often leave the reader with a rather bleak impression: the ever-accelerating pace of global capitalism leaves little time for the natural rhythms of food production, and more sustainable futures are only imaginable through out-of-the-box innovations. In the spirit of Gibson-Graham's (2008) reading for difference, this paper suggests the possibility of a different and more hopeful interpretation of food practices existing on the household level.

<sup>16</sup> We acknowledge here the diverse diets of our respondents, in which fruits and vegetables played more or less significant role. Our data does not allow us to generalise the importance of informal economies and seasonal rhythms for other types of food. Furthermore, our future research will compare the diets of gardening and non-gardening household to further comprehend the influence of FSP on eating patterns.

Our research questions the hegemony of the market-based food economy by showing that other ways of obtaining food are not only multiple and substantial but also favoured by their practitioners and influential in their food-related behaviours. While the seasonal patterns observed in this study confirm this, they also deliver another general point concerning the temporalities related to everyday food practices. The food provisioning practices of our respondents – who reside in an urban centre of an industrialised country and lead a relatively affluent lifestyle – are subject to the capitalist temporality of round-the-clock availability and on-the-go fast consumption. However, these forces do not seem more important than the cyclical temporality of the growing seasons. The findings presented in this paper thus add to the emerging body of literature that problematises the narrative of Euromodern linear time eclipsing ‘traditional’, cyclical, and nature-related time.

This paper complements current literature on diverse food economies by examining traditional non-market economies. This opens new opportunities for exploring diverse interconnections and hierarchies among diverse food sources. It also allows us to contest the implicit but persistent tendency in the debates on alternative food practices to search for novel, emerging initiatives, thus locating their transformative potential in the unidentified future. Instead, our findings highlight the relevance of a practice embedded in a long-term tradition, which has often been portrayed as outdated and in decline but which, however, presents a food alternative with contemporary relevance.

#### CRedit authorship contribution statement

**Lucie Sovová:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Petr Jehlička:** Writing – review & editing, Writing – original draft, Supervision, Conceptualization.

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#### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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#### Data availability

Data will be made available on request.

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