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PILLAR 3

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Acronym: BESWEP

Title: The Belgian Short-Time Work scheme: Economic and Psychological Impacts

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Introduction

This research studies the impact of the Belgian short-time work (STW) compensation scheme (known as "*temporary unemployment*") on economic and psychological outcomes in the short and longer term. STW is a federal policy instrument and subsidizes temporary reductions in working time in firms affected by temporary shocks. It allows employers experiencing temporary economic downturns to reduce their employees' working time without severing the employment relationship. Employees receive a subsidy that partially compensates for the loss of income.

By preventing excessive layoffs, STW avoids the costly process of separation and re-hiring and may thereby also avoid the bankruptcy of firms. From the employees' perspective, it avoids the social cost of unemployment and reintegration into the labor market. On the psychological side, STW entails bright and dark sides for workers and employers. It is considered beneficial because it prevents job loss (for workers) and alleviates companies' costs (for employers). Yet, STW remains a disruptive event among affected workers.

STW has had particular resonance during the COVID-19 pandemic and in its immediate aftermath. At the peak of the lockdown in April 2020, as many as 1,167 million people - about 30% of eligible employees - benefited from a Corona version of STW for at least one day. Given the large public expenditure implications, it is of high policy relevance to investigate the short- and medium-term effects of STW on the labor market.

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PART A. Micro-econometric evaluations of STW on various firm and employee outcomes

Research Question 1 (RQ1). The effect of STW on employment and firm survival both pre- and post-Corona periods

The central research hypothesis is that the uptake of STW has positive effects on employment and on firms' survival probabilities for firms experiencing economic downturns of aggregate or idiosyncratic firm/sector-specific nature. Impact evaluations of STW programs have mainly focused on aggregate economic shocks. This is mainly because negative macroeconomic shocks have a larger effect on unemployment and STW offers an alternative to hoarding labor in the presence of temporary shocks. However, still scarce is the evidence on the effect of STW in the presence of temporary but idiosyncratic firm/sector-specific shocks (Cahuc and Nevoux, 2018).

Overall, the literature recognizes that STW may stabilize employment by preventing excessive layoffs through an increase in the firm's flexibility to adjust employees' working time rather than severing the employment relationships. The empirical evidence on the effects of STW take-up on labor demand decisions falls into two categories. On the one hand, macro-econometric evaluations that have generally identified positive impacts on employment (Boeri and Bruecker, 2011; Brey and Hertweck, 2020; Cahuc and Carcillo, 2011; Hijzen and Martin, 2013; Hijzen and Venn, 2011) are limited in their ability to identify causal effects. Microeconomic evaluations, on the other hand, aim to identify causal effects by using firm-level data and focusing on variation within a country while maintaining a uniform institutional framework. However, much is still unknown about the effectiveness of STW on employment (Cahuc, 2019) and the results of microeconomic evaluations are mixed (Balleer et al., 2016; Bellmann and Gerner, 2011; Calavrezo et al., 2010; Tilly and Niedermayer, 2017; Tracey and Polachek, 2020). Despite the fact that Belgium has one of Europe's oldest, large and most well-established STW program, there is no evidence of its impact. Struyven et al. (2017) and Vandekerhove et al. (2020) examine the effects of STW during the 2008-2009 and recent corona recessions from a descriptive, rather than an evaluative, perspective.

The magnitude of the positive impact of STW on employment and firm survival is *heterogeneous* and depends on the *magnitude* and the *duration* of the shock, and on the *selection* of employees and firms insured by the policy. Recent robust micro-econometric evaluations (Cahuc, et al. 2021; Giupponi and Landais, 2022; Kopp and Siegenthaler, 2021) shed light on the first line of inquiry, and they all reach the same conclusion: STW has large positive employment effects for firms affected by a deep negative economic shock, but not for firms affected by a small or more persistent shock. In that case, STW only provides short-term insurance (and not medium- or long-term insurance) to workers, as they will eventually be laid off. Moreover, uptake of STW for a prolonged period may hinder

the process of creative job destruction and negatively impact the process of job reallocation by preserving employment in low-productivity firms (Giupponi and Landais, 2022).

Furthermore, the selection of insured employers and employees is also expected to affect the magnitude of the policy's positive impact. For instance, employment effects are larger for firms with liquidity constraints or that experienced a larger productivity shock during the crisis (Cahuc, et al. 2021). In the absence of STW, these firms cannot engage in the costly process of labor hoarding, mostly in negative phases of the business cycle, when financial constraints are tighter for them. Likewise, employment effects are hypothesized to be larger for employees whose job match is long-lasting (i.e. open-ended contracts) since the extent of match-specific human capital may be more valuable for the firm in this case (Giupponi and Landais, 2022).

In addition, lesser is known about the effects of STW on firm survival. This policy tool may increase firms' survival for firms with little financial slack. Some evidence indicates that STW has a positive effect on firm survival, which is greater for firms with liquidity constraints (Giupponi and Landais, 2022) whereas other research does not find evidence on firm survival (Cahuc et al., 2021). STW programs do not appear to help particularly hard-hit firms survive, despite their large positive effects on employment, but the liquidity constraint channel appears to be a key component of the scheme's effectiveness in terms of surviving probability. STW appears to be advantageous for firms with low liquidity levels, especially when shocks are prolonged and widespread. However, further analysis is needed to address different sources of heterogeneity on the effects of STW on employment and firm survival.

Our research contributions: By analyzing the impact of one of the largest and most well-established STW schemes in Europe and using a rich set of administrative firm-level data, our contribution is threefold. We want to: 1) provide sound causal evidence regarding the short-run and long-run effects of STW programs on employment and firm survival using micro-econometric evaluation techniques; 2) analyze the short-run and long-run heterogeneous effects of STW programs across firms' characteristics and 3) across types of economic shocks (aggregated vs. idiosyncratic firm/sector specific shocks).

Research Question 2 (RQ2). The dynamic impact of STW on individual labor market outcomes

The evaluation of the dynamic effects of STW on individual labor market outcomes relies on the comparison of STW-insured employees with respect to two groups: unemployed, or employees eligible for STW but not insured by this policy. The development of credible counterfactuals based on these two groups enables us to quantify the causal effect of STW on worker outcomes such as (re)employment probabilities, total hours worked, and total earnings (Giupponi and Landais, 2022). We intend to contribute to the scant literature by providing causal evidence that allows us to quantify the effects of STW while accounting for differential effects among control groups.

On the one hand, STW workers are expected to have better employment prospects than unemployed individuals in the short term because STW prevents job loss and the negative long-scarring effects of unemployment which may further deteriorate future (re)employment probabilities. The total amount of hours worked is also expected to be greater for STW-insured employees than for unemployed since the first type of employee works on a reduced working schedule, whereas the second category completely loses their job. Further, employees on STW have greater earnings because they receive normal income for the hours worked plus a transfer that partially compensates for the loss of income rather than only the sole unemployment insurance transfer. STW-insured employees, on the other hand, are expected to perform worse for all three outcomes when compared with STW eligible but uninsured employees (Giupponi and Landais, 2022; Tilly and Niedermayer, 2017). However, no clear-cut hypothesis can be drawn for the dynamic effects on these outcomes.

Most economic contributions on the impact of STW hypothesizes that its adoption impacts individual employees' labor market prospects but recognizes that the effects may be heterogeneous between a short-term or a mid-term analysis. In fact, there may be no dynamic effects of STW in a medium-horizon since the impact of STW can dissipate across time. The only evidence of the dynamic effects of STW on an individual's outcomes indicates large employment outcomes effects in the short-run for employees taking up STW compared to laid-off employees, but these effects quickly dissipate, particularly in the context of a persistent economic shock (Giupponi and Landais, 2022; Tilly and Niedermayer, 2017). Moreover, taking into account the persistent economic shock addressed

in this impact evaluation, Giupponi and Landais (2022) conclude that workers in STW schemes experience worse labor market outcomes in the long term than workers in similar firms that are not in STW schemes. Clearly, there is a need for additional research on the long-term effects of STW programs on career path outcomes, and we attempt to contribute to filling this void.

Additionally, these heterogeneous dynamic effects can further differ according to the nature and the evolution of the economic crisis STW uptake is due to. They can also depend on socio-demographic groups (i.e.: women and youth), and types of firms in which the job-match is done. For instance, Giupponi and Landais (2022) find no differences in the long-run probability of being employed and earnings for STW workers in low productivity firms compared to laid-off workers in similar firms in the context of a persistent economic crisis. On the other hand, for STW workers in high productivity firms, they find that long-run outcomes after treatment are significantly better than those of laid-off workers in similar high productivity firms. In addition, recent, although non-causal evidence (Hijzen and Salvatori, 2022) suggests that during the Covid-19 public health crisis, STW was less effective in sheltering low educated workers on temporary contracts, by increasing their risk of losing their jobs, but this effect seems to dissipate in the following periods. Furthermore, there is no evidence of the differential effects of STW on the probability of losing jobs, across gender, part-time status, and age groups. Certainly, the STW long-term heterogeneous impact on individual outcomes across firms, workers, and job characteristics needs to be further explored in the literature and our contribution will be to provide further insights into this area.

Our research contribution: By using a rich and under-explored set of employee-employer matched individual-level administrative data and robust micro-econometric techniques we contribute to the literature in two ways. First, by constructing credible counterfactuals we are interested in quantifying the causal long-term impact of STW on labor market outcomes. Second, we would like to provide evidence on the heterogeneous effects of STW on worker labor market outcomes such as hours worked, probability of losing a job, probability of changing jobs, earnings, and social transfers.

Research Question 3 (RQ3). The effectiveness of experience rating in STW

A sizeable body of the literature assumes that excessive STW uptake can be attributed to the employer's uptake behavior (Giupponi, et al., 2022) and originates from the presence of *asymmetric information* between public entities subsidizing STW and insured employers about the effective *volume* and the *duration* of STW support (Burdett and Wright, 1989; Boeri and Bruecker, 2011; Cahuc and Carcillo, 2011; Hijzen and Venn, 2011). As highlighted by Burdett and Wright (1989), STW schemes implemented by unemployment insurance can bias the average number of hours worked *downwards* because they subsidize reductions in working time. Accordingly, the reduction in working time can be inefficient (i.e. hours are reduced more than what is needed given the size and the duration of the economic shock) in the absence of incentive schemes that would limit this overuse of STW. Given the concern for employers' opportunistic behaviors of this sort, many STW systems in continental Europe include Experience Rating (ER) among the leading STW institutional features, a policy that *modulates* the payment of STW insurance *premia* by insured employers to their use of this policy instrument. Early theoretical research contributions in the literature on ER in STW suggest that the adoption of experience-rated contribution systems provides adequate incentives to *contain* inefficiently high (and prolonged) insurance uptakes (Burdett and Wright, 1989).

National and international evidence at the European level offers examples of how experience-rated contribution systems apply in STW. Most European systems impose an increasing contribution rate on the behalf of firms based on the firm's choice to uptake STW or not and on the duration of STW use. In this international context, the Belgian ER system figures as an interesting case study because employers' contributions are based on excessive STW use at the intensive margin, and overuse is monitored at the worker level. On top of that, the specific ER design for Belgium has the potential to strengthen the *equitability objective* of STW schemes (Abraham and Houseman, 1994) by providing additional incentives to distribute the burden of the adjustment in working time over a large number of workers, rather than limiting STW usage for few workers. However, very limited is the empirical evidence on the effectiveness of ER in STW both at the international and national levels, and on its differential impact depending on the typology of the shock STW uptake is due to, disentangling uptake resulting from seasonal fluctuations or aggregate negative economic shocks. The scant evidence on ER in STW sharply contrasts with the large literature on ER in UI (Card and Levine, 1994; Anderson and Meyer, 2000; Guo and Johnston, 2021; Johnston, 2021), mostly focusing on the US labor market context where the ER system operates almost uniformly in all states, which broadly analyzes the causal effects of ER in UI, focusing both on ER effectiveness and incidence.

Theoretical economic contributions on the role of ER underline that the inclusion of this policy instrument in STW schemes should be combined with an experience-rated Unemployment Insurance (UI) system since its introduction in STW reduces the attractiveness of the scheme for employers and may lower STW take-up at the expense of higher UI uptake (Cahuc and Carcillo, 2011; Cahuc and Nevoux, 2018). Further, research efforts provide prescriptions for *optimal ER design* in STW, underlying that the degree of ER should be *imperfect* (Cahuc and Carcillo, 2011), meaning that employers should not bear the total STW induced cost and that the design of ER should be *adapted to the phases of the business cycle* (Cahuc and Nevoux, 2018). The first prescription recognizes that a perfect ER system may not be efficient when employers have limited access to financial markets and risk bankruptcy if they have to cover the entire social cost of STW usage. The second prescription conjectures that ER contributions should be lowered -or delayed- during negative economic downturns to avoid further distress for liquidity-constrained firms or firms with imperfect access to the financial market. The impact of the ER design is, however, still largely underexamined in spite of the growing body of literature on STW.

Our research contribution: We aim at a threefold contribution. By relying on the quasi-experimental source of variation offered by three reforms of high policy relevance for the ER system in Belgium and on the rich set of employee-employer matched individual-level administrative data, we aim at identifying and quantifying the causal impact of ER on STW usage in Belgium, focusing at the intensive margin of STW use (i.e. the intensity of STW use and not the decision to use STW). Furthermore, based on the specific rules of the Belgian ER system, we intend also to estimate if and how this particular design impacts the distribution among employees of STW use for firms affected by this regulation. The final objective is to build up a theoretical model able to model the underlying features of ER in Belgium, simulate its functioning based on the empirical estimates and investigate how policy reforms may improve the ER system in Belgium.

PART B. Impact of STW on employee-employer relationships, well-being, and careers: a psychological perspective

Although STW compensation schemes are not new in Europe, few scholars have investigated their psychological consequences so far. Existing studies mainly focused on the implementation of furlough (i.e. a government policy, used in the U.S., that—like STW—allows employers to put workers on temporary leave, but without necessarily guaranteeing income) in public administrations. These studies (e.g. Halbesleben et al., 2013; Hohman et al., 2013; Mandeville et al., 2019; Osborne et al., 2012; Pelletier et al., 2015) showed that furloughs can have ambivalent consequences for workers and employers. As insightful as this field of research can be, most of the studies took place in the U.S. and in contexts characterized by the lack of entitlement to unemployment benefits, whereas such an entitlement tends to be the standard for STW workers. In our view, this difference calls for research specifically on STW. In addition, literature so far does not seem to have addressed all potential consequences of STW and did not yet probe into all underlying mechanisms that explain workers' experiences during furlough or STW.

In response to the gaps in the existing literature, our overall aim is to investigate the bright and dark sides of STW for workers, as well as their implications for the employer. Because such a scheme alleviates companies' costs while saving jobs in the short term, it tends to be considered beneficial for workers and employers. Yet, STW remains a disruptive event that may stimulate negative thoughts on management practices, true capacity for action, and career trajectories among affected workers. Accordingly, the objective of Part B of the present project is threefold. The first and second research questions explore the positive and negative impact of STW on the employee-employer relationship and well-being, with a focus on unexplored explanatory mechanisms. The third research question probes the effect of STW on perceived employability and other career-related outcomes.

Research Question (RQ4): The impact of STW on the employee-employer relationship

Previous research highlighted that furloughed workers may have both negative and positive emotions towards their employer. Furlough, as an organization-wide hardship (see Levi et al., 2019), may affect general perceptions of fairness and lead to psychological contract breach (Huffman et al., 2021). This might explain the positive relationship observed between furloughs and turnover intentions (Hohman et al., 2013; Huffman et al., 2021). In contrast, furlough has also been associated with feelings of gratitude, resulting in support for the furlough decision (Osborne et al., 2012). In fact, evidence indicates that furlough decision tends to foster negative workers' perceptions in a limited way because it is more often perceived as appropriate and unavoidable in a difficult economic context (Lee and Sanders, 2013). Inasmuch as furlough spreads the burden of the economic downturn across the whole workforce, it may indeed be perceived as fairer than other cutback management strategies, such as layoffs (Reid, 1982; Sucher and

Winterberg, 2014). From that perspective, furlough can be seen as a lesser evil than other policies. In that regard, there is some indication that the terms of furlough and the organizational context may influence the valence and intensity of workers' reactions. For instance, Huffman and colleagues (2021) found that the duration of furlough and perception of procedural justice regarding furlough implementation have an impact on perceptions of psychological contract breach and subsequent turnover intentions. Findings from a qualitative study also suggest that the quality of managerial communication about furloughs, as well as the level of contact with managers and the opportunity to share one's views whilst furloughed might preserve organizational commitment (Szulc and Smith, 2021).

Overall, there are still substantial questions remaining about STW and its consequences on the employee-employer relationship. First, there is a scarcity of empirical research on the impact of furlough or STW on job attitudes (namely, organizational commitment) and organizational identification. Second, except for the violation of the psychological contract, studies have underinvestigated explanatory mechanisms for the outcomes of furlough and STW. Typically, they have disregarded that such schemes might also play a crucial role in social identity processes—which might, in turn, affect organizational outcomes, including job performance and turnover. Third and lastly, little is still known about the factors that promote either positive or negative consequences following such an experience.

In light of current gaps in the literature, RQ4 concentrates on the consequences of STW in terms of organizational commitment and identification. Our arguments are inspired by social identity (Ashforth and Mael, 1989) and social exchange (Blau, 1964) theories. In particular, we argue that there may be two distinct paths to understand workers' reactions to STW. On the bright side, workers may feel that the employer, who secures their jobs through STW, demonstrates organizational support (i.e. cares about their well-being and values their contributions; Eisenberger and Stinglhamber, 2011). Moreover, they may experience feelings of shared adversity that may reinforce their impression that the organization is entitative (i.e. forms a unified group; Blanchard et al., 2020). Based on previous evidence, such perceptions likely have a positive impact on organizational commitment and identification (Blanchard et al., 2020; Marique et al., 2013; Rhoades and Eisenberger, 2002). On the dark side, STW may trigger feelings of isolation and remoteness, associated with perceptions of being treated like a tool for the organization's ends. Indeed, STW may signal that the company favors profit over workers' welfare, enhancing perceptions of organizational dehumanization (see Bell and Khoury, 2016). These feelings should negatively affect organizational commitment and identification, due to a perceived lack of reciprocity in the employment relationship and an inclination to dissociate from the organization (e.g. Brison et al., 2021; Caesens et al., 2019; Mulki et al., 2008; Wiesenfeld et al., 2001). As a result, we hypothesize that STW might lead to mixed attitudes. In a supplementary way, we assume that the likelihood of taking the bright or dark path may be conditional on the specific terms of STW and the organizational context, including management practices.

Our research contributions: By considering the bright and dark sides of STW in terms of uncharted outcomes and studying such policy in relation to the concepts of organizational dehumanization, perceived organizational support, workplace isolation, and entitativity, the research contributes to a deeper understanding of workers' reactions following STW. While furlough or STW constitutes a response to external pressure (e.g. economic downturn, pandemic, public policy, etc.), employers often have the discretion to set up conditions that moderate the disruptive nature of this event (Bellairs et al., 2014). The present research, which investigates how STW characteristics and organizational context affect workers' perceptions, takes this into account.

Research Question 5 (RQ5): The impact of STW on well-being

As in the case of the employee-employer relationship, previous research suggests that being furloughed may have positive and negative consequences on well-being. On the positive side, furlough offers the opportunity to engage in recovery experiences, such as relaxation or psychological detachment from work, which may positively affect well-being (Grandey et al., 2021; Halbesleben et al., 2013). On the negative side, past empirical research found that being affected by furlough may trigger negative emotions such as sadness, fear, and anger in workers (Osborne et al., 2012). In the longer term, this experience may be associated with emotional exhaustion, lower levels of life satisfaction, and psychological health due to stress (see for e.g. Baranik et al., 2019; Jones et al., 2014; Halbesleben et al., 2013). Indeed, furloughed workers tend to experience a temporary loss of financial stability, a disruption of time with coworkers, and a decline in feelings of success at work, which can increase strain despite restoration of pay at the end of furlough (Baranik et al., 2019). Recently, the massive use of STW and other forms of precarious work in the pandemic context sparked the interest of scholars examining the general impact of the Covid-19 crisis on individuals' well-being. Consistently with past

research on the U.S. furlough system, a small number of articles (Grandey et al., 2021; Griffith et al., 2021; Mörhing et al., 2020, Tušl et al., 2021) confirmed that STW, among other factors, played a part in the development of life and work satisfaction during the crisis.

It is worth noting that the studies examining the impact of furlough and STW on well-being have predominantly focused on the actual loss of resources experienced by STW workers. None of them probed whether STW significantly fuels the perceptions that one's job, career, and related resources might be threatened in the future—in particular, in comparison with workers who were not put on STW. Besides, the literature has yet to explore how STW workers rebalance professional and private lives in the longer run and how this undertaking globally influences their work and life satisfaction.

In the context of RQ5, we therefore aim to study the extent to which STW may represent an unvolitional event that changes workers' perception of resources and ability to gain and preserve them in the future. We expect that this change of perception may affect outcome variables such as burnout (Schaufeli et al., 2020), work engagement (Schaufeli et al., 2019), and life satisfaction (Diener et al., 1985). Specifically, our objective is to scrutinize two antagonistic effects of STW on well-being. On the bright side, we posit that STW may be the opportunity to restore a healthier relationship with work. As suggested by past research (Mandeville et al., 2019), the experience of STW may challenge the role played by work as a meaning framework and may cause a shift in life priorities. With this in mind, we expect that some profiles of workers—especially workers who have started a family—may show lower levels of work centrality after the experience of STW, resulting in lower levels of work-family conflict. In turn, this decrease in work-family conflict is likely to have a positive impact on life satisfaction since fewer resources are lost in the process of juggling both work and family roles (e.g. Grandey and Cropanzano, 1999). On the dark side, STW may indicate that one's job and career are at risk due to a global and objective decrease in labor demand. Consequently, it may be perceived as a strong antecedent of job insecurity and as a threat to benefits associated with employment, leading to strain (e.g. De Cuyper et al., 2009). Additionally, we hypothesize that sociodemographic variables and terms of STW might determine the extent to which STW affects well-being via the path identified. For instance, the duration and repetitive use of STW should enhance job insecurity because they tend to be objective indicators of a lasting troublesome macroenvironment.

Our research contributions: The present project contributes to existing research by unraveling the way workers perceive and reallocate resources after the shock caused by STW. Contrary to past research, it also considers how the terms of STW (i.e. duration of STW, repetitive use of STW, and proportion of STW per week) might be involved in the development of workers' well-being.

Research Question 6 (RQ6): The impact of STW on perceived employability and individual careers

Scholars have not yet investigated how furlough and STW affect individual careers—except for turnover intentions. The view that contextual factors—such as STW—which are beyond individual control and trigger insecurity, may interfere with perceived employability is, however consistent with prior findings (Kirves et al., 2014). Using a person-centered approach, previous studies (Kirves et al., 2014; Mäkikangas et al., 2013; Törnroos et al., 2017) revealed unstable trajectories of perceived employability among certain profiles of workers. In particular, workers with high levels of job insecurity seem more likely to experience negative changes in perceived employability (Mäkikangas et al., 2013). Interestingly, interviews conducted during the pandemic (Szulc and Smith, 2021) unveiled that STW workers tend to perceive skillsets as important criteria when selecting workers to be put on STW. This perception could particularly explain why certain individuals reflect upon their employability following STW.

In the absence of research addressing the topic, RQ6 examines career trajectories following STW and looks into workers' ability to resume their careers after such an event. It assumes that workers may react differently to STW when it comes to pursuing and building their careers. Some workers may still feel that their careers are relatively stable—especially in comparison with unemployed workers—and may, therefore, remain confident in their “possibilities of obtaining and maintaining employment” (Vanhercke et al., 2014, p. 594). Knowing that perceived employability is related to positive career outcomes (Vanhercke et al., 2015) and may ease desirable job transitions (Nelissen et al., 2017), STW and induced free time can be expected to influence career development in a positive way for those workers. In contrast, some workers may experience STW as a career shock (i.e. “a disruptive and extraordinary event that is, at least to some degree, caused by factors outside the focal individual's control and that triggers a deliberate thought process concerning one's career”; Akkermans et al., 2018, p. 4) that undermines perceived employability in the short run. Over time,

some workers might recover perceived employability in parallel with the crisis having led to STW, whereas others might experience the “scarring effect” (see for e.g. Knäbe and Ratzel, 2011) of STW and still be affected in the long run. Complementarily, we assume that the shape of perceived employability trajectories may differ depending on the individual background and the intensity of career shock at stake. In that regard, Akkermans and colleagues (2018) identified five features of career shocks (i.e. frequency, predictability and controllability, valence, duration, source) explaining shock intensity and its consequences. In line with this view, we posit that terms and context surrounding STW should play a role in the development of perceived employability over time.

Our research contributions: The scarcity of research looking into the impact of STW on perceived employability and career-related outcomes, in the long term, constitutes a critical gap in the literature that the present research proposes to address. The use of a person-centered approach focusing on career trajectories might provide insight into the profiles of workers that are more likely to suffer from a negative career shock.

Policy-making implications

The project will provide policymakers and stakeholders with sound scientific evidence of the short- and long-term economic and psychological impact of temporary unemployment in Belgium, partly focusing on the 2007-2008 financial crisis and the Covid-19 induced economic crisis. This evaluation has obvious relevance because of the large number of employers and employees who have benefited from short-time work arrangements during the two economic crises and the considerable public resource spending in the financing of this policy instrument.

Furthermore, the provision of expertise-based evaluation for the two fields will feed the ongoing debate at the national and international levels on the effectiveness of this policy tool and of the implications of a particular policy design. By highlighting the existence of a dark side to STW, the psychological perspective may encourage stakeholders not to underestimate the negative shock that the use of such a policy instrument may imply for workers. Past research has already demonstrated the importance of anticipating the effects of the workplace survival syndrome (i.e. a set of negative emotions, attitudes, and behaviors, notably characterized by feelings of anger, guilt, and anxiety) occurring in workers who have the chance to remain part of an organization after a downsizing. In the same way, we suspect that certain profiles of STW workers might need additional support from employers and other relevant stakeholders. In parallel, the psychological perspective proposes to determine how implementation choices may induce different reactions with the aim of making recommendations for an optimal policy design.

Finally, the adoption of a differentiated perspective of the effects of temporary unemployment on different socio-demographic groups will allow a more targeted approach to groups that are disadvantaged in terms of labor market outcomes, such as women and youths.

Bibliographic overview (Part A)

Abraham, K. and Houseman, S. (1994), Does employment protection inhibit labor market flexibility? Lessons from Germany, France, and Belgium, in R. Blank (ed.), *Social Protection versus Economic Flexibility: Is There a Trade-Off?*, University of Chicago Press, Chicago

Anderson, P. M. and Meyer, B. D. (2000), The effects of the unemployment insurance payroll tax on wages, employment, claims, and denials, *Journal of Public Economics* 78(1), 81-106.

Balleer, A., Gehrke, B., Lechthaler, W., & Merkl, C. (2016). Does short-time work save jobs? A business cycle analysis. *European Economic Review*, 84, 99–122.

Bellmann, L., & Gerner, H.-D. (2011). Reversed Roles? Wage and Employment Effects of the Current Crisis. In H. Immervoll, A. Peichl, & K. Tatsiramos (Eds.), *Who Loses in the Downturn? Economic Crisis, Employment and Income Distribution* (Vol. 32, pp. 181–206). Emerald Group Publishing Limited.

Boeri, T., & Bruecker, H. (2011). Short-time work benefits revisited: Some lessons from the Great Recession. *Economic Policy*, 26(68), 697–765.

- Brey, B., & Hertweck, M. S. (2020). THE EXTENSION OF SHORT-TIME WORK SCHEMES DURING THE GREAT RECESSION: A STORY OF SUCCESS? *Macroeconomic Dynamics*, 24(2), 360–402.
- Burdett, K., & Wright, R. (1989). Unemployment insurance and short-time compensation: The effects on layoffs, hours per worker, and wages. *Journal of Political Economy*, 97(6), 1479-1496.
- Cahuc, P. (2019). Short-time work compensation schemes and employment. *IZA World of Labor*, 2019: 11v2
- Cahuc, P., & Carcillo, S. (2011). Is short-time work a good method to keep unemployment down? *Nordic Economic Policy Review*, 1(1), 133–165.
- Cahuc, P., Kramarz, F., & Nevoux, F. (2021). The Heterogeneous Impact of Short-Time Work: From Saved Jobs to Windfall Effects. CEPR Discussion Paper No. DP16168.
- Cahuc, P., & Nevoux, S. (2018). Inefficient Short-Time Work. Banque De France Working Paper.
- Calavrezo, O., Duhautois, R., & Walkowiak, E. (2010). Short-Time Compensation and Establishment Exit: An Empirical Analysis with French Data (SSRN Scholarly Paper No. 1631124). Social Science Research Network.
- Card, D., and Levine, P. B. (1994). Unemployment insurance taxes and the cyclical and seasonal properties of unemployment. *Journal of Public Economics*, 53(1), 1-29.
- Drydakis, N. (2021). The relationship between recessions and health. *IZA World of Labor*.
- Giupponi, G., and Landais, C. (2020). Subsidizing labor hoarding in recessions: The employment & welfare effects of short-time work. Working paper. CEPR Discussion Paper No. 13310, CEP Discussion Paper No. 1585, WorkINPS Paper No. 16
- Giupponi, G., Landais, C., & Lapeyre, A. (2022). Should We Insure Workers or Jobs during Recessions? *Journal of Economic Perspectives*, 36(2), 29–54.
- Guo, A., & Johnston, A. C. (2021). The Finance of Unemployment Compensation and Its Consequences. *Public Finance Review*, 49(3), 392-434.
- Hijzen, A., & Martin, S. (2013). The role of short-time work schemes during the global financial crisis and early recovery: A cross-country analysis. *IZA Journal of Labor Policy*, 2(1), 5.
- Hijzen, A., & Venn, D. (2011). The Role of Short-Time Work Schemes during the 2008-09 Recession. OECD.
- Kopp, D., & Siegenthaler, M. (2021). Short-Time Work and Unemployment in and after the Great Recession. *Journal of the European Economic Association*, 19(4), 2283–2321.
- Johnston, A. (2021). Unemployment Insurance Taxes and Labor Demand: Quasi-Experimental Evidence from Administrative Data. *American Economic Journal: Economic Policy*, 13(1), 266-93.
- Struyven, L., Van Waeyenberg, H., and Vandekerckhove, S. (2017). Het effect van economische werkloosheid tijdens de crisis op lange termijn, *Over.Werk*, 1/2017, 93-98.
- Tilly, J., & Niedermayer, K. (2017). Employment and Welfare Effects of Short-Time Work. 66.
- Tracey, M. R., & Polachek, S. W. (2020). Heterogeneous Layoff Effects of the US Short-Time Compensation Program. *LABOUR*, 34(4), 399–426.
- Vandekerckhove, T., Struyven, L., Goesaert, T., and Vets, P. (2020). Hotspots van tijdelijke werkloosheid, hotspots van arbeidsmarktdynamiek? Sectorale impact, omvang en profiel van tijdelijke werkloosheid in de eerste maanden van de Coronacrisis. Dynam rapport 2020/1, Working paper in het kader van de samenwerking met RSZ, RVA, KSZ, BISA, DWSE en IWEPS, Leuven: HIVA, KULeuven.

Bibliographic overview (Part B)

- Akkermans, J., Richardson, J., & Kraimer, M.L. (2020). The Covid-19 crisis as a career shock: Implications for careers and vocational behavior. *Journal of Vocational Behavior*, 119, 103434.
- Akkermans, J., Seibert, S.E., & Mol, S.T. (2018), Tales of the unexpected: integrating career shocks in the contemporary careers literature, *South African Journal of Industrial Psychology*, 44, 1-10.
- Ashforth, B. E., & Mael, F. (1989). Social identity theory and the organization. *Academy of management review*, 14(1), 20-39.
- Bellairs, T., Halbesleben, J. R. B., & Leon, M. R. (2014). A multilevel model of strategic human resource implications of employee furloughs. In Bellairs, T., Halbesleben, J. R. B., Leon, M. R. (Eds.), *Research in personnel and human resources management* (pp. 99–146). Bingley, UK: Emerald Group.
- Bell, C. M., & Khoury, C. (2016). Organizational powerlessness, dehumanization, and gendered effects of procedural justice. *Journal of Managerial Psychology*, 31, 570–585. doi: 10.1108/JMP- 09-2014-0267.
- Blanchard, A. L., Caudill, L. E., & Walker, L. S. (2020). Developing an entitativity measure and distinguishing it from antecedents and outcomes within online and face-to-face groups. *Group Processes & Intergroup Relations*, 23(1), 91-108.
- Blau, P. M. (1964). *Exchange and power in social life*. New York, NY: Wiley.
- Brison, N., Stinglhamber, F., & Caesens, G. (2021). Organizational dehumanization. *Oxford Research Encyclopedia in I/O Psychology*.
- Caesens, G., Nguyen, N., & Stinglhamber, F. (2019). Abusive Supervision and Organizational Dehumanization. *Journal of Business Psychology*, 34, 709–728.
- Caesens, G., Stinglhamber, F., Demoulin, S., & De Wilde, M. (2017). Perceived organizational support and workers' well-being: The mediating role of organizational dehumanization. *European Journal of Work and Organizational Psychology*, 26, 527-540.
- De Cuyper, N., & De Witte, H. (2010). Impress to become employable. The case of temporary workers. *Journal of Career Development*, 37, 635–652.
- De Cuyper, N., De Witte, H., Vander Elst, T., & Handaja, Y. (2010). Objective threat of unemployment and situational uncertainty during a restructuring: Associations with perceived job insecurity and strain. *Journal of Business and Psychology*, 25(1), 75-85.
- De Cuyper, N., Notelaers, G., & De Witte, H. (2009). Job insecurity and employability in fixed-term contractors, agency workers, and permanent workers: Associations with job satisfaction and affective organizational commitment. *Journal of Occupational Health Psychology*, 14(2), 193–205.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71, 500–507
- Eisenberger, R., & Stinglhamber, F. (2011). Perceived organizational support. In R. Eisenberger & F. Stinglhamber, *Perceived organizational support: Fostering enthusiastic and productive employees* (pp. 25–60). American Psychological Association. doi:10.1037/12318-002
- Fontinha, R., José Chambel, M., & De Cuyper, N. (2012), "HR attributions and the dual commitment of outsourced IT workers", *Personnel Review*, 41(6), 832-848. doi:10.1108/00483481211263773
- Grandey, A. A., & Cropanzano, R. (1999). The Conservation Of Resources model applied to work–family conflict and strain. *Journal of Vocational Behavior*, 54(2), 350–370. doi.:10.1006/jvbe.1998.1666

- Grandey, A. A., Sayre, G. M., & French, K. A. (2021). "A blessing and a curse": Work loss during coronavirus lockdown on short-term health changes via threat and recovery. *Journal of Occupational Health Psychology, 26*(4), 261–275. doi: 10.1037/ocp0000283
- Griffiths, D., Sheehan, L., van Vreden, C., Petrie, D., Grant, G., Whiteford, P., Sim, M. R., & Collie, A. (2021). The Impact of Work Loss on Mental and Physical Health During the COVID-19 Pandemic: Baseline Findings from a Prospective Cohort Study. *Journal of occupational rehabilitation, 31*(3), 455–462; doi/ 10.1007/s10926-021-09958-77
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2014). *Multivariate data analysis*. Edinburgh: Pearson Education Limited.
- Halbesleben, J. R. B., Wheeler, A. R., & Paustian-Underdahl, S. C. (2013). The impact of furloughs on emotional exhaustion, self-rated performance, and recovery experiences. *Journal of Applied Psychology, 98*, 492–503. doi:10.1037/a0032242
- Harvey, P., Madison, K., Martinko, M., Crook, T. R., & Crook, T. A. (2014). Attribution theory in the organizational sciences: The road traveled and the path ahead. *The Academy of Management Perspectives, 28*(2), 128–146.
- Hobfoll, S. E., Shirom, A., & Golembiewski, R. (2000). Conservation of resources theory. *Handbook of organizational behavior, 57*-80.
- Hohman, M., Packard, T., Finnegan, D., & Jones, L. (2013). The Effect of Mandatory Furloughs on Self-Determination, Financial Strain, and Decision to Leave the California State University System in Social Work Faculty. *Journal of Social Work Education, 49*(4), 748–759.
- Huffman, A. H., Albritton, M. D., Matthews, R. A., Muse, L. A., & Howes, S. S. (Accepted/In press). Managing furloughs: how furlough policy and perceptions of fairness impact turnover intentions over time. *International Journal of Human Resource Management*. doi: 10.1080/09585192.2021.1879207
- Jones, L., Hohman, M., Mathiesen, S., & Finnegan, Daniel. (2014). Furloughs and Faculty Management of Time: Maintaining Quality in an Economic Crisis. *Journal of social work education. 50*(2), 334-348. doi:10.1080/10437797.2014.856244.
- Jung, T., & Wickrama, K.A.S. (2008), An Introduction to Latent Class Growth Analysis and Growth Mixture Modeling. *Social and Personality Psychology Compass, 2*, 302-317.
- Kirves, K., Kinnunen, U., De Cuyper, N., & Mäkikangas, A. (2014). Trajectories of perceived employability and their associations with well-being at work: A three-wave study. *Journal of Personnel Psychology, 13*(1), 46–57.
- Knabe, A., & Rätzl, S. (2011), Scarring or Scaring? The Psychological Impact of Past Unemployment and Future Unemployment Risk. *Economica, 78*, 283-293. doi:10.1111/j.1468-0335.2009.00816.x
- Lee, S., & Sanders, R. (2013). Fridays Are Furlough Days: The Impact of Furlough Policy and Strategies for Human Resource Management During a Severe Economic Recession. *Review of Public Personnel Administration, 33*, 299-311. doi: 10.1177/0734371X13477426.
- Levi, A., Shapiro, D. L., Fried, Y., Markoczy, L., & Noghani, F. (2019). When everyone works harder for fewer rewards, is it fair? Implications of "organization-wide hardship" for managing and studying organizational fairness. *Group & Organization Management, 44*(2), 396–424. doi: 10.1177/1059601119837045
- Mäkikangas, A., De Cuyper, N., Mauno, S., & Kinnunen, U. (2013). A longitudinal person-centered view on perceived employability: The role of job insecurity. *European Journal of Work and Organizational Psychology, 22*(4), 490–503. doi:1080/1359432X.2012.665230
- Mandeville, A., Whitman, M., & Halbesleben, J. (2019). The meaning of furloughs on family identification. *Personnel Review, 48*(6), 1596–1610. doi: 10.1108/PR-07-2018-0245
- Marique, G., Stinglhamber, F., Desmette, D., Caesens, G., & De Zanet, F. (2013). The relationship between perceived organizational support and affective commitment: A social identity perspective. *Group & Organization Management, 38*(1), 68-100.

- Möhring, K., Naumann, E., Reifenscheid, M., Wenz, A., Rettig, T., Krieger, U., Friedel, S., Finkel, M., Cornesse, C., & Blom, A. (2020). The COVID-19 pandemic and subjective well-being: longitudinal evidence on satisfaction with work and family. *European Societies*, 23, 1-17. 10.1080/14616696.2020.1833066.
- Mulki, J. P., Locander, W. B., Marshall, G. W., Harris, E. G., & Hensel, J. (2008). Workplace isolation, salesperson commitment, and job performance. *Journal of Personal Selling & Sales Management*, 28(1), 67-78.
- Muthén, L. K., & Muthén, B. O. (2017). *Mplus Statistical Analysis with Latent Variables User's Guide (Version 8)*. Los Angeles, CA Authors.
- Nelissen, J., Forrier, A., & Verbruggen, M. (2017) Employee development and voluntary turnover: testing the employability paradox. *Human Resource Management Journal*, 27: 152– 168. doi: 10.1111/1748-8583.12136.
- Nishii, L. H., Lepak, D. P., & Schneider, B. (2008). Employee attributions of the "why" of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. *Personnel Psychology*, 61(3), 503–545. doi: 10.1111/j.1744-6570.2008.00121.x
- Olson-Buchanan, J. B., & Boswell, W. R. (2008). An integrative model of experiencing and responding to mistreatment at work. *The Academy of Management Review*, 33(1), 76–96.
- Osborne, D., Smith, H. J., & Huo, Y. J. (2012). More than a feeling: Discrete emotions mediate the relationship between relative deprivation and reactions to workplace furloughs. *Personality and Social Psychology Bulletin*, 38(5), 628–641. doi:10.1177/0146167211432766
- Reid, F. (1982). UI-Assisted Worksharing as an Alternative to Layoffs: The Canadian Experience. *Industrial and Labor Relations Review*, 35(3), 319–329. doi: 10.2307/2522812
- Rhoades, L., & Eisenberger, R. (2002). Perceived organizational support: a review of the literature. *Journal of applied psychology*, 87(4), 698.
- Schaufeli, W.B., De Witte, H., & Desart, S. (2020). Manual Burnout Assessment Tool (BAT). KU Leuven, Belgium:
- Schaufeli, W. B., Shimazu, A., Hakanen, J., Salanova, M., & De Witte, H. (2019). An Ultra-Short Measure for Work Engagement: The UWES-3. Validation Across Five Countries. *European Journal of Psychological Assessment*, 35(4), 577-591.
- Spector, P. (2001). Research Methods In Industrial and Organizational Psychology: Data Collection and Data Analysis With Special Consideration To International Issues, in N. Anderson, D. S. Ones, H. K. Sinangil & C. Viswesvaran (Eds.), *Handbook of Industrial, Work & Organizational Psychology*, Sage Publishing, p. 10-26
- Sucher, S. J., & Winterberg, S. (2014). Furloughs: An alternative to layoffs for economic downturns. *Harvard Business School*, 9 (314-097), 1-9.
- Zulc, J., & Smith, R. (2021). Abilities, Motivations, and Opportunities of Furloughed Employees in the Context of Covid-19: Preliminary Evidence From the UK. *Frontiers in Psychology*, 12. doi:10.3389/fpsyg.2021.635144
- Törnroos, K., Bernhard-Oettel, C., & Leineweber, C. (2017). Perceived employability trajectories: A Swedish cohort study. *Journal of occupational health*, 59(4), 336–344. doi: 10.1539/joh.16-0295-OA
- Tušl, M., Brauchli, R., Kerksieck, P., & Bauer, G. (2021). Impact of the COVID-19 crisis on work and private life, mental well-being and self-rated health in German and Swiss employees: a cross-sectional online survey. *BMC Public Health*, 21(141). doi: 10.1186/s12889-021-10788-8.
- Van De Voorde, K., & Beijer, S. (2015), The role of employee HR attributions in the relationship between high-performance work systems and employee outcomes. *Human Resource Management Journal*, 25(1), 62-78. doi: 10.1111/1748-8583.12062

Vander Elst, T., Richter, A., Sverke, M., Naswall, K., De Cuyper, N., & De Witte, H. (2014). Threat of losing valued job features: The role of perceived control in mediating the effect of qualitative job insecurity on job strain and psychological withdrawal. *Work & Stress: An International Journal of Work, Health & Organizations*, 28(2), 143-164.

Vander Elst, T., Van den Broeck, A., De Witte, H., & De Cuyper N. (2012) The mediating role of frustration of psychological needs in the relationship between job insecurity and work-related well-being, *Work & Stress*, 26(3), 252-271. doi: 10.1080/02678373.2012.703900

Vanhercke, D., De Cuyper, N., Peeters, E., & De Witte, H. (2014). Defining perceived employability: A psychological approach. *Personnel Review*, 43(4), 592–605. doi:10.1108/PR-07-2012-0110

Vanhercke, D., Kirves, K., De Cuyper, N., Verbruggen, M., Forrier, A., & De Witte, H. (2015), "Perceived employability and psychological functioning framed by gain and loss cycles", *Career Development International*, 20(2), 179-198.

Volkema, R. J., Farquhar, K., & Bergmann, T. J. 1996. Third-party sensemaking in interpersonal conflicts at work: A theoretical framework. *Human Relations*, 49: 1437–1454.

Wiesenfeld, B. M., Raghuram, S., & Garud, R. (2001). Organizational identification among virtual workers: The role of need for affiliation and perceived work-based social support. *Journal of Management*, 27(2), 213–229. doi: 10.1016/S0149-2063(00)00096-9