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RESEARCH ARTICLE

World Wars and the Establishment of Welfare Ministries

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Abstract

Welfare ministries are key institutions of modern nation-states. However, we still lack knowledge about when and why national welfare ministries were established. In this paper, we argue that both the First and Second world wars were major driving forces behind the establishment of independent welfare ministries. To test our argument, we introduce a novel dataset on the establishment of welfare-related ministries in 30 countries. Our empirical findings suggest that the establishment of independent welfare ministries was a product of wartime turbulence and the political, economic and social shockwaves set off especially by World War I, which affected many countries at the same time. Considering alternative explanations such as the Spanish Flu, the Bolshevik Revolution or the emergence of new nation-states, we argue that war triggered multiple, interrelated and chronologically staggered transnational events and transformations that had major effects on the social welfare systems of the countries involved. In this light, we conclude that World War I was ultimately the root cause behind the establishment of welfare ministries.

Keywords: welfare state; war; welfare ministries; history; public policy; bureaucracy

JEL classification: N3 History of Welfare

> "The Home Secretary, in introducing the Bill, said that this Department was to do war work only at the moment."
>
> (Ramsay MacDonald, Founder of the British Labour Party and subsequently British prime minister, Hansard, 18 December 1916).

Introduction

Ministries are key institutions in the administrative machinery of modern states (see Blondel and Cotta 2000; Blondel and Thiébault 1991; Rose 1976, 1987; Van de Walle and Brans 2018; Willson 1955). They are key institutional actors for drafting and implementing legislation, setting social policy agendas, evaluating policies, or

providing national data. Not surprisingly, several comparative studies have shown that a highly developed state administration can accelerate both the consolidation and expansion of the welfare state (Amenta and Carruthers 1988; DeViney 1983; Flora and Alber 1981; Heclo 1974). Apart from administrative professionalization and capacity, an independent minister of social affairs tends to accord greater weight to social policy issues in the cabinet (Wallin 1969). This suggests that independent welfare ministries are important actors in social policy because they are motivated to make social protection both more comprehensive and more effective.

Nevertheless, the comparative research on the historical development of welfare states has all too often tended to take the welfare ministries for granted. Existing comparative research on the establishment of ministries is scarce, highlighting either the gradual expansion of state functions in general (Marquez and Joly 1986; Rose 1976) or the diffusion of international norms in the post-1945 period (Strang and Chang 1993; Thomas and Lauderdale 1988). We are not aware of any comparative studies that have examined the timing and factors that could explain the establishment of ministries explicitly in charge of welfare-related issues. This lacunae in welfare state research is surprising given the fact that welfare ministries today administer by far the largest item of the government budget in all the Western democracies (Obinger 2021).

This paper attempts to fill this research gap. Following arguments by Wallin (1969: 60) on how World War I (WWI) influenced the establishment of labor ministries, we argue that war was a major driving force, enhancing both state capacities and stimulating administrative reform. To test our argument, we compiled a novel dataset on the establishment of welfare-related ministries in 30 Western countries. Our dataset is based on structured country reports tracing the institutionalization of national welfare bureaucracies between 1900 and 1950. The reports have been provided by experts[1] specialized in social policy and historical welfare state research.

Our focus on the formation of welfare ministries at the national level subsumes such organs as ministries of social affairs (which are responsible for most or all fields of social policy), ministries of labor, and ministries of health. We consider these types of ministries to comprise the core of the welfare bureaucracy, as demonstrated by their early appearance and relatively stable existence.[2] The evaluation of our dataset shows that 70% of the countries surveyed created independent welfare ministries during or immediately after the Great War. Furthermore, we find that specialized divisions within ministries of the interior, trade or finance were often responsible for drafting welfare legislation and for administrating social affairs prior to the formation of independent welfare ministries.[3]

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[2]Other welfare-related administrative bodies, such as ministries of family affairs, housing or pensions, are rare internationally and were not only established much later but also often short-lived.

[3]This can be exemplified by the German case. In 1880, a department for trade and commerce was created in the Ministry of the Interior (*Reichsamt des Innern*), which was responsible for social insurance, industrial

Welfare ministries[4] were typically established *after* nations had introduced their first social protection schemes and, as we will see, most countries established welfare ministries during the Great War or immediately after the armistice.

To demonstrate the link between war and the establishment of welfare ministries, we proceed in four steps. In the next section, we describe the state of the art concerning those factors driving the formation of national ministries. In the subsequent section, we introduce our argument that highlights the crucial role of war; here we present what we believe are the key causal mechanisms linking warfare and administrative reform. We develop three hypotheses about why, how and when war has affected the formation of welfare ministries. The next section introduces our novel dataset on the establishment of independent welfare ministries. We use regression analyses to test the three hypotheses. The empirical findings show that the formation of welfare ministries is a product of a transnational wartime crisis generated by the political, economic, and social shockwaves unleashed by the Great War; our "shockwave" argument contrasts with the alternative hypothesis that sees the formation of welfare ministries as the result of a nation's direct involvement in warfare. Next, we qualify the wartime crisis by discussing four interrelated and chronologically staggered transnational events and transformations (the Bolshevik Revolution, the Spanish flu pandemic, state collapse, and the foundation of the ILO) that temporarily overlapped with war and might presumably have triggered the formation of welfare ministries. While these events were certainly important, we nevertheless conclude that war is ultimately the main causal impetus behind the establishment of welfare bureaucracies.

Research on the formation of welfare ministries

In the comparative welfare state literature, the interest in welfare ministries is ambiguous. On the one hand, ministries are assumed to be important for welfare policy administration, or even as autonomous actors in the political processes influencing social reforms (Amenta and Carruthers 1988; Heclo 1974; Kettl 2006; Lundqvist and Petersen 2010; Skocpol 1985). On the other hand, the existence of welfare ministries is often taken for granted, which means that we have only few studies that explicitly examine the establishment of national welfare ministries as such. A pioneering study is Rose's (1976) attempt to develop a "comprehensive framework for classifying public policies" in Western nation-states from 1849 through the post-World War II era. Rose focuses on the establishment and activities

hygiene, trade regulations and labor protection. These tasks were transferred to the Reich Economic Office (*Reichswirtschaftsamt*) in 1917 and to the Reich Labour Office (*Reichsarbeitsamt*) in the final days of the war. Finally, in February 1919, the Reich Ministry of Labour (*Reichsarbeitsministerium*) was created.

In addition, the Reich Insurance Office (*Reichsversicherungsamt*) was established in 1884 as a subordinate authority of the Ministry of the Interior. It was initially the supreme supervisory authority for accident insurance, but it eventually became responsible for all branches of social insurance. This example not only shows that a welfare bureaucracy was already in place before an independent social ministry was established, but also that war led to a restructuring of social administration. Moreover, it illustrates that despite the name "Reich Ministry of Labour", the ministry was in fact responsible for almost all fields of social policy.

[4]After their establishment, these ministries did not live in "splendid isolation", but were subject to restructuring, transformations and name-changes related to changes in domestic politics.

of national ministries and also describes the general expansion of state activity (see also Rose 1987). He shows how modern nation-states attempted to ensure their own existence by establishing ministries for "maintenance" and "securing resources" (foreign affairs, defense, interior, justice, and finance) (Rose 1976: 255). Then, in a second phase, states gradually expanded their activities by establishing new ministries for the mobilization of physical national resources. It was only later, in a third phase, that states established ministries providing "social benefits for the sake of its citizens" (ibid.: 258). Rose offers a detailed discussion of each of these three phases – including national variations in timing and various exceptional cases. However, he never elaborates on the causal factors behind the establishment of the new ministries in the first place.

An important strand of research concerning the establishment of national ministries in general is influenced by the World Society (or World Polity) framework (Meyer et al. 1997). Even though the decision to establish ministries is the prerogative of national governments, this theory draws attention to cultural explanations and interstate relations. Nation-states and domestic agents are influenced by a global set of specific cultural norms for what constitutes a good, modern, efficient state. These global norms, it is argued, have major effects on the adoption of policy programs (for welfare programs, see Strang and Chang 1993; Thomas and Lauderdale 1988) as well as for the structure of the state (including the portfolio of ministries). Within this theoretical framework, we find several large-N studies explaining the establishment of national ministries after World War II (WWII). Kim's comprehensive study of the expansion of government structures in 138 countries from 1945 to 1990 shows a rapid growth in the number of ministries, especially since the 1960s (Kim 1996: 10). Within the World Polity framework, we also find studies of how national policy concerns were driven by international agencies (Jang 2000; Kern et al. 2001: 15–17; Russel 2015). Arguing that democracies are more responsive to international pressure than authoritarian states, Aklin and Urpelainen (2014) attribute the rise of environmental ministries to a combination of international pressures and democratization at the domestic level.

None of these World Society-inspired studies focus explicitly on the establishment of welfare-related ministries. Moreover, they analyze administrative reforms only *after* 1945, implying that the expansion of government structures is a post-WWII phenomenon. Even though national welfare ministries are "responsible for converting public resources into the program outputs of the mixed economy of the welfare state" (Rose 1987: 4), there is little comparative research on the establishment of welfare ministries.

The existing literature on national welfare ministries comprises a quite heterogeneous collection of case studies, often published either as Festschrifts in relation to anniversaries of the ministry or as a by-product of broader studies of welfare-related policy fields (see e.g. Antonsen 2001; Bargeton and Ziegler 1971; Gutheil-Knopp-Kirchwald 1998; Hartrodt 1926). Typically, these studies take the form of descriptive accounts of the decision-making process within the context of domestic political history. In sum, the mixed and uneven character of national case studies of single welfare ministries offers little opportunity for systematic comparative analysis.

Comparative work on the history of welfare ministries is rare, with a few exceptions in the areas of health and labor. Marquez and Joly (1986), in their study on the

institutionalization of public health in Latin America, examine the harbingers of national health ministries. Between 1880 and 1926, as many as 20 Latin American countries established national departments of health. The authors emphasize the importance of "historical specificities" for the establishment of national health departments that were forerunners of national health ministries. The growing political attention to public health since the late nineteenth century can be seen "as a natural extension of the state's function to stimulate overall capital accumulation" (ibid.: 381). Public health measures and social security institutions were viewed as meeting the urgent needs of industrialization while also serving "as an important mechanism of social stabilization." Wallin's (1969) article remains the only comparative study of which we are aware that sheds light on the international spread of labor ministries. In his descriptive overview, Wallin emphasizes the diffusion of global norms as a major factor behind the evolution of labor administrations, including the formation of labor ministries. Taking as a point of departure the founding of the International Labour Organization (ILO) in 1919 (and the international conferences preceding the ILO's founding), Wallin argues that a combination of international and domestic factors, notably the labor movement, encouraged industrializing countries in Europe and beyond to establish new administrative units to handle what was called the "Social Question" or "the Worker's Question." During what Wallin (1969: 60) describes as the third phase of institutionalization[5], that is, the period following WWI, ministries of labor emerged in the true sense of the term, that is, as government organs dealing exclusively with labor and social questions (ibid.: 60).

War and the emergence of welfare ministries: Causal mechanisms and hypotheses

Wars not only contributed to the formation of modern nation-states and bureaucracies. They also served to enhance state tax powers and capabilities (Hintze 1906; Kiser and Linton 2001; Scheve and Stasavage 2010, 2012; Tilly 1975), particularly at the central state level (Elias 1939). There are three main reasons for this. First, the conduct of war requires organization and financing. Second, waging a war with conscript armies raises issues of fairness. Total war, as were the two world wars, imposed a heavy "blood tax" on young males, whereas older and wealthy men bore a much smaller burden of the war costs and in some cases even benefited from the wartime economy. As a consequence, the blood tax imposed by conscription gave rise to a "conscription of income" (Bullock 1917). This logic of equal sacrifice (Wilensky 1975: 71) was a key impetus for the introduction of new taxes and enhanced tax progressivity (Scheve and Stasavage 2010, 2012). Third, war creates enormous socio-economic dislocations that have historically led to state intervention, which in turn requires an effective bureaucratic apparatus. Therefore, it is likely that the formation of independent welfare ministries occurred at the national level, since local governments and private charity organizations would have been

[5]The first phase of institutionalization was marked by the opening of labor offices (central research and statistical services), and the second phase by national labor inspection systems and agencies enforcing labor regulation as part of existing ministries. See Wallin (1969: 60).

unable to address the tremendous social needs and burdens generated by the horrors of war.

All three factors were particularly important for both world wars. Massive advances in military technology and the spread of universal conscription in the second half of the nineteenth century profoundly changed the nature and conduct of warfare (Obinger and Petersen 2017). Consequently, both the First and Second world wars were waged as industrialized mass wars, causing hitherto unknown destruction, as well as an unprecedented number of war victims, both soldiers and civilians. Total war not only aimed at the complete destruction of the enemy's military capacities, however. It was also an economic war that affected warring and non-belligerent nations and peoples alike. Trade embargoes were imposed in order to harm the opponent's economy and to weaken the morale of the population. Together with the needs and demands of the overall war effort, the war economy caused shortages of goods, services and foodstuffs, further exacerbated by labor scarcity resulting from the draft. Ultimately, the market economy was replaced by a heavily regulated wartime economy, or what contemporary observers described as "war socialism" (Stolper 1915). Economic planning and state intervention in social and economic affairs included the rationing of all kinds of goods and services, price regulations, currency controls, trade regulations, nationalizations of companies and heavy regulation of labor markets (Klausen 1998; Porter 1994). In the state of total war, the very survival of the nation was at stake, and large segments of the population were exposed to the horrors of warfare. This led to a "risk flip" and a higher demand for social protection (Rehm 2016).

All these facets and ramifications of industrialized mass warfare required the build-up of state administrative capacities in the form of specialized and professionalized ministries. This administrative expansion included the formation of independent welfare ministries. Some of these newly established institutions were a direct offspring of the war effort, as several countries introduced temporary wartime ministries for public nutrition or for the repatriation and compensation of veterans. Examples of such ministries were the Austrian Ministry for Public Nutrition (established in 1915), the Australian Department of Repatriation (established in 1917) and the British Ministry of Pensions (established in 1916), the latter responsible for payment of pensions and grants to veterans and their dependents.

The establishment of such war-related temporary ministries and their civilian welfare counterparts reflected a more general administrative transformation during wartime. Following extant literature on the effect of war on state-building (Klausen 1998; Porter 1994; Tilly 1975) and based on our previous research on the impact of war on welfare reform (Obinger and Petersen 2017; Obinger and Schmitt 2018), we test three hypotheses, each of which attempts to account for both the timing and determinants behind the creation of welfare state bureaucracies. As far as the timing is concerned, we assume that independent welfare ministries were created in response to both world wars. Furthermore, we hypothesize that welfare ministries were formed mainly in the late war period or immediately following armistice (H1) for two reasons. First, social problems tended to increase as total war progressed, and these problems reached a climax at the end of war(s) (Obinger and Schmitt 2018; Obinger et al. 2018). The acceleration of social problems stems from the increasing death toll, rising numbers of disabled servicemen, the increase in the

number of injured or homeless civilians, and the general deterioration of living standards due to unemployment, inflation, food shortages and spread of diseases. The second reason as to why welfare ministries should be being established precisely at the end of wars is related to the consequences of war's end: military demobilization and the reintegration of millions of ex-servicemen into society and labor markets, the dismantling of the munitions industry, the influx of war refugees in the wake of border revisions, post-war economic crisis and the political aftershocks of war all created massive challenges to social and political cohesion. Increased state planning and state intervention were required to deal with these many social problems (ibid.; Porter 1994; Klausen 1998). Our second hypothesis (H2) deals with the extent to which a country was affected by the hardships of war (Titmuss 1958). More hardship, as we argue above, should lead to the creation of welfare ministries. Hence, the probability of establishing a welfare ministry should increase with war intensity, or a nation's exposure to war. It should be emphasized here that the negative impacts of war do not simply affect the belligerent countries. Total war will cause severe social and economic problems in non-belligerent countries as well (Obinger et al. 2018). Hence our third hypothesis (H3): that the formation of welfare-related ministries was a response to a general transnational wartime crisis that affected all countries simultaneously and in similar ways.

War and the formation of independent welfare ministries: Empirical evidence

To study the causal factors behind the establishment of welfare ministries in comparative perspective, we compiled a novel dataset on the establishment of welfare-related ministries in 30 countries in Europe and North America, plus the Antipodes and Japan. We invited experts specialized in social policy and/or historical welfare state research to carry out structured country reports tracing the institutionalization of a national welfare bureaucracy between 1900 and 1950, with special emphasis on the establishment of independent welfare ministries. These reports not only reveal a substantial cross-national variation in terms of jurisdiction, organization, and names (e.g. ministry vs. department). They also reveal a complex and chequered development of welfare ministries characterized by splits, mergers and other organizational restructurings typical of governments everywhere. The portfolio of welfare ministries varied from one country to another over time, reflecting the fact that administrative functions were sometimes transferred to the new ministries, or that some policy fields (such as labor migration or veterans' benefits) remained the prerogative of other ministries.

Based on the country reports, we distinguish between two types of welfare ministries (or departments as they are called in some countries). The two types are distinguished by their scope of activity. Hence, what we call a *Social Ministry* is a governmental body responsible for several social policy areas. Examples are the Austrian Ministry of Social Affairs (established in 1917) or the German *Reichsarbeitsministerium* (established in 1919). These can best be described as "super ministries," in that they were responsible for almost all branches of social security (see also footnote 3). The second type of welfare ministries are those

Figure 1. The establishment of independent welfare ministries in 30 countries until 1950.
Notes: The years of introduction are based on country reports. The dashed vertical reference lines indicate the end of the WWI and WWII, respectively.

responsible for a particular welfare function. By far the most important of these specified bodies were *Ministries of Labour* and *Ministries of Health*.[6] We call this category of specialized ministries a "*welfare-related ministry.*"

Figure 1 shows the establishment of labor, health and social ministries in 30 countries. Three episodes/waves of institutionalization can be distinguished. First, there are the "early movers," such as France, New Zealand, Norway, or Belgium, which had already established welfare-related ministries around the turn of the twentieth century. Second, there is a dramatic burst of establishments during and after the Great War. Seventy percent of the 30 countries simultaneously created independent welfare ministries during or immediately after the Great War. Finally, a much smaller cluster of latecomers established new welfare ministries in the 1940s. This evidence is clearly in line with our main argument of the importance of war for the formation of welfare ministries. In addition, Figure 1 corroborates H1, as most welfare ministries were established in the latter part of the war or immediately after the end of hostilities.

[6]Ministries of labor typically focus on industrial relations and social risks related to the labor market. Ministries of health are typically responsible for national regulation of public health, health care systems, prophylactic health interventions, etc. Other ministries such as ministries of pensions or ministries of family affairs existed in only a very few countries until 1950. The crucial point, however, is that nowhere were these cases of the first welfare-related ministry. Also not included in our analysis are war-related ministries specifically serving veterans and war victims.

While this descriptive evidence already points to a strong impact of war on the formation of welfare ministries, a multivariate regression analysis is required to distinguish between the competing hypotheses H2 and H3, that is, whether war intensity (H2) or a general wartime effect (H3) was most important for the establishment of independent welfare ministries.

The dependent variable in all the regressions carried out is the introduction of a welfare-related ministry. Hence, the dependent variable is coded one when a country introduced a ministry of labor, health or social affairs in a given year, and it is coded zero otherwise for those years when a ministry was not introduced. Once a welfare ministry has been established in a country, the country is excluded from the analysis. To analyze the influence of war on the establishment of a welfare ministry, we estimate random effect logit models using a standard maximum likelihood procedure.

To test the relative influence of war intensity (H2) or wartime in general (H3) on the probability of introducing a welfare-related ministry (model 1, Table 1), we used an index of war intensity for each world war, developed by Obinger and Schmitt (2018), to serve as an indicator of the extent to which a country has been affected by violence and combat activities. The index is the unweighted sum of three standardized indicators that capture the different aspects of mass warfare, namely: (1) the duration of war in months; (2) the military and civilian[7] casualties as a percentage of the pre-war population; and (3) the presence of combat activities on the national territory.[8] Covering the war period and the two immediate post-war years, the index of war intensity measures the effect of war on a given country; in all other peacetime years, the index equals zero. Second, to test whether the establishment of welfare ministries is a general wartime product (H3) rather than a result of war intensity, we include period dummy variables capturing WWI and WWII and the short aftermath of the wars.

In model 2, we examine whether welfare ministries were established mainly during the war or right after armistice (H1) by using separate period dummies for the war and post-war periods. Furthermore, period dummies for the interwar period, as well as for the period before WWI, are included in all models, thus enabling a contrast between the results for the wartime variables with peacetime periods.[9]

The regression analyses summarized in Table 1 suggest that the establishment of welfare ministries took place irrespective of a nation's war exposure. The war intensity index is statistically significant only at the 10% level for WWI and insignificant for WWII (model 1). By contrast, the period dummies for wartime are highly significant for both world wars. Overall, this evidence is in line with H3, supporting our hypothesis of a general wartime effect, while there is no support for H2, according to which the likelihood of establishing a welfare-related ministry is higher in countries highly exposed to war.

[7]Only World War II.

[8]For details, see Obinger and Schmitt (2018).

[9]The baseline category refers to the period from 1948 onwards, i.e., the years not included in one of the period dummies. Furthermore, we tested whether our dependent variable was influenced by alternative time-dependent processes not captured by the period dummies, and we included a cubic polynomial approximation (see Carter and Signorino 2010) and a linear trend variable in the robustness tests. The results do not differ substantively from those reported in Tables 1 and 2.

Table 1. Introduction of ministries of health, social affairs and labor

	(1) Odds ratio	(2) Odds ratio
War intensity effects		
WWI intensity (1914–20)	4.607*	
	(4.074)	
WWII intensity (1939–47)	0.243	
	(0.401)	
WWI + 2-year-post-war period	3.639**	
	(2.030)	
WWII + 2-year-post-war period	21.39***	
	(24.23)	
Wartime Effects		
WWI period (1914–18)		5.689***
		(3.288)
Post-WWI period (1918–20)		7.902***
		(4.458)
WWII period (1939–45)		15.80**
		(17.86)
Post-WWII period (1945–47)		1.009
		(1.629)
Interwar period (1920–39)	0.150*	0.144*
	(0.166)	(0.159)
Pre-WWI period	1.136	1.118
	(0.645)	(0.631)
Constant		
Number of observations	1,341	1,341
Number of countries	21	21

Source: Own dataset.
Note: Odds ratio are reported; robust standard errors clustered by country in parentheses.; The baseline category for the time dummies is the period after WWII from 1948 onwards.
***$p < 0.01$, **$p < 0.05$, *$p < 0.1$, note that standard errors for odds ratio are calculated as follows: se(OR) = exp(_b[_var])*_se[_var].

Our first hypothesis, that welfare ministries were established mainly in the late war period or right after armistice, finds support only for WWI, as we find a higher probability that a welfare ministry is established in the immediate post-war period than in wartime.

In Table 2, we include a set of explanatory variables to test whether the wartime effect remains stable. All models control for the impact of three variables discussed in much of the comparative social policy research. First, GDP per capita is the key

Table 2. Establishment of ministry of health, social affairs and labor – alternative explanations

	(1) Socio-economic factors	(2) Political variables	(3) International factors	(4) State-Structures
WWI + 2-year-post-war period	6.353***	6.741***	6.890***	6.215***
	(3.149)	(3.321)	(4.461)	(3.072)
WWII + 2-year-post-war period	13.56**	17.05***	13.64**	12.57**
	(15.13)	(18.57)	(16.00)	(14.50)
Interwar period (1921–38)	0.144*	0.148*	0.145	0.146*
	(0.159)	(0.168)	(0.176)	(0.170)
Pre-WWI (-1913)	1.117	1.055	0.896	0.533
	(0.630)	(0.622)	(0.596)	(0.343)
GDP per capita	1.000	1.000	1.000	1.000
		(4.74e-05)	(7.17e-05)	(5.36e-05)
Democracy	1.081**	1.140**	1.091**	1.060
	(0.0405)	(0.0632)	(0.0388)	(0.0380)
Age of welfare state	1.006	0.997	0.995	1.002
	(0.00543)	(0.00865)	(0.0107)	(0.00660)
Urbanization	25.69***			
	(30.37)			
GDP growth	0.828			
	(1.579)			
Ideology		1.094		
		(0.255)		
Corruption		8.457		
		(11.50)		
ILO member			1.403	
			(0.827)	
Trade			0.988	
			(0.0139)	
Regional Government Index				0.811
				(0.316)
Statistical office				0.267
				(0.245)
Number of observations	1,341	1,036	1,239	1,274
Number of countries	21	20	21	20

Source: Own dataset.
Note: Odds ratios are reported; Robust standard errors clustered by country in parentheses; the baseline category for the time dummies is the period after WWII from 1948 onwards.
***$p < 0.01$, **$p < 0.05$, *$p < 0.1$; note that standard errors for odds ratio are calculated as follows: se(OR) = exp(_b[_var])*_se[_var].

variable of functionalist welfare state theory (Wilensky 1975). Data on GDP per capita (in 2011 US Dollars) is provided by the Maddison Project Database (2018). The level of economic development is an indicator of modernization, and we therefore expect economic affluence to have a positive impact on the introduction of a welfare ministry. Moreover, the establishment of welfare ministries might vary with the political regime type. We include an index measuring the level of democracy provided by the Polity IV Project (Marshall et al. 2014). This indicator ranges from −10 (autocracy) to +10 (full democracy). We posit that democracies are more likely to build welfare ministries than autocracies, as they are more responsive to social problem pressure and related political demands. Furthermore, we expect that the maturity of the welfare state influences the establishment of welfare-related ministries. Specifically, we expect that countries with many social security schemes in place are more likely to introduce a welfare ministry than countries with younger or newly established welfare states. We therefore control for the average year for the introduction of old age pensions, unemployment compensation, health and accident insurance and family allowances.[10]

We have also controlled for additional variables that might affect the establishment of welfare ministries. Model 1 includes several socio-economic variables such as the extent of urbanization and GDP growth. In model 2, we have controlled for several political variables. This model includes a dummy variable that captures government ideology and equals one in the case of a left-wing head of government and zero otherwise (*Left government*). We assume that left-wing governments are more inclined to set up a welfare administration compared to right-wing governments. The data is taken from Brambor et al. (2017). To control for the quality of the state apparatus, we use the level of political *corruption* provided by Coppedge et al. (2020) (Vdem).[11] Trade relations and ILO membership are controlled for in model 3. Wallin (1969: 51) argues that ILO membership accelerated the formation of labor administrations, as the Treaty of Versailles conferred governments the right to communicate with the ILO, enabling them to bypass the usual diplomatic channels. In 1928, the ILO officially invited governments to set up "an adequate and specialized department, capable of performing successfully, widely and fully the task of preparing, amending and securing the application of all the acts and regulations to labor" (ibid.: 60–61). We test this hypothesis by including a dummy variable that equals one if a country is member of the ILO and zero if they are not (*ILO membership*). Furthermore, we control for the extent of economic openness as measured by the sum of exports and imports per capita *(Trade per capita).* Data is taken from the "Correlates of War" project (Marshall et al. 2014).

Model 4 examines the impact of state structures. To measure the extent to which policy responsibilities are decentralized and to capture the degree of regional autonomy, we use the *Regional Government Index*, taken from Coppedge et al. (2020) (Vdem).

[10]As we have only data for our independent variables for a smaller sample of 21 countries, the multivariate regression analyses include the following countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, New Zealand, Norway, Netherlands, Portugal, Spain, Sweden, Switzerland, United States, and United Kingdom.

[11]Alternatively, we used tax revenues (Andersson and Brambor 2019) to account for the variance in state capacity. The results of our variables of interest remain the same.

We assume that the establishment of ministries is easier in centralized political settings. Lastly, we control for institutional forerunners of a welfare bureaucracy by including the year when labor statistics offices were established. We hypothesize that the early introduction of such institutions accelerated the formation of ministries.[12]

The results in Table 2 clearly show that welfare ministries have been established in wartime or in the immediate aftermath of war. The coefficients for the period dummies capturing wartime and the post-war period of WWI are positive and highly statistically significant. The probability of establishing a welfare ministry during or within the two-year period after WWI is estimated to be more than six times higher than during the peacetime years directly following a war. This is a remarkable result considering the size and statistical significance of the coefficients, but also given their stability and robustness across different model specifications, controlling for all major alternative explanations. It should be noted that the likelihood of creating an independent welfare ministry in the interwar period is significantly lower than in all other time periods, as indicated by a coefficient less than one.

In terms of the control variables, democratization is the most statistically significant. Our multivariate findings suggest that democracies push the establishment of welfare ministries. Besides democratization, only the level of urbanization is estimated to be a major factor for the establishment of welfare ministries. None of the other control variables reach the conventional levels of statistical significance.[13]

Taken together, the results for our main variables of interest, that is, the war variables, strongly support our overall argument (H1) that both world wars, especially WWI, were key driving forces behind the formation of welfare ministries. Most of the welfare ministries were established in the late war period or immediately following the end of the military conflict. In contrast to H2, however, war intensity was not a major causal factor in the establishment of welfare ministries. Instead, and in line with H3, the formation of a welfare ministry can be attributed to a general wartime crisis that affected many countries simultaneously and in similar ways.

Making sense of the wartime effect

The empirical evidence presented in the previous section clearly points to the importance of wartime rather than war intensity for explaining the establishment of most welfare ministries. But what is this wartime effect? In this section, we try to

[12]In our sample, some countries, such as Ireland and Finland, achieve their independence relatively late. Moreover, Switzerland has a no explicit welfare ministry. We therefore classified the Bundesamt für Sozialversicherung (established 1912) as social ministry and the Bundesamt für Industrie, Gewerbe und Arbeit (established 1929) as labour ministry, as it was responsible for the unemployment insurence and labour market policy. However, our results reported in the tables remain the same when controlling for both issues by including respective dummy variables.

[13]With respect to party ideology, we also looked at the party affiliation of the first welfare ministers, but we could identify no clear pattern. Most of the first ministers are from either Liberal or Social Democratic parties, but the list also includes independent or Conservative ministers as well as the Communist minister of Social Assistance Alexander Shliapnikov (1917) and the right-wing populist Romanian minister of Labour Grigore Trancu-Iași (1920). Concerning the ministries established prior to WWI, the first ministers were mostly affiliated with Liberal parties.

qualify the wartime effect of WWI and to specify the underlying causes giving rise to the establishment of welfare ministries. This is no simple task, as several interrelated domestic[14] and transnational events were operating both during wartime and in the immediate post-war period.

In the next two subsections, we qualify the wartime effect. We start by discussing four transnational events that temporarily overlapped with war and might have influenced the formation of welfare ministries: (1) the Bolshevik Revolution, (2) the Spanish flu and other communicable diseases, (3) state collapse and state-building, and (4) the foundation of the ILO. In a next step, we employ two strategies for disentangling the *causal* effects of wartime events on the establishment of welfare ministries and for gauging the impact of war on welfare state development in general. First, we consider the *temporal order* of these events and WWI. This is based on a straightforward argument: cause must precede effect. In this respect, the outbreak of the WWI preceded major European events such the Bolshevik Revolution, the Spanish flu pandemic, the establishment of the new post-war order including new nation-states, and the founding of ILO. Second, we ask whether these transnational events would have occurred if there had been no total war. In all four cases, our conclusion is negative.

The influence of transnational events on the establishment of welfare ministries

In this section, we present possible alternative explanations for the establishment of welfare ministries. We focus on inter- and transnational events around WWI, as this was the period when the vast majority of welfare ministries were established. The Bolshevik Revolution, the Spanish flu and other communicable diseases, state collapse and state-building and the founding of the ILO are closely related events that affected many countries. Together with the domestic negative repercussions of war, these nested developments and events exacerbated a severe transnational wartime crisis that informed the build-up of welfare administrations.

The 1917 Bolshevik Revolution exemplifies the threat to the political establishment and the increased pressure to enact welfare reforms, stemming from a rising and radicalized labor movement. Czarist Russia became a socialist regime, and part of this transformation involved the early establishment of a Ministry of Social Affairs in 1917. The Bolshevik Revolution sent shockwaves through war-torn European societies and triggered a red scare among European establishments (Gerwarth and Horne 2012). Fear of Bolshevism was reinforced by the split of the European Left movements into reformist and revolutionary wings because the Social Democrats had rallied behind their national flags during wartime and supported truce policies and agreements. As a result, the Bolsheviks' violent seizure of power prompted welfare reforms in Europe in an effort to contain the spread of communism (Rasmussen and Knutsen 2020). Using membership in the Comintern – the Moscow-initiated network for world revolution – as an indicator of domestic revolutionary threat, Rasmussen and Knutsen show that countries where the national communist party participated in the founding meeting of the Comintern (1921) were more likely to undertake labor market reforms and social

[14]We discussed war-related domestic drivers of administrative transformation in section 3.

spending than those without communist movements. The authors do not discuss the organizational aspects of welfare policies (such as the introduction of welfare ministries), but arguably, the establishment of welfare ministries could be interpreted as a response to a perceived communist threat for both practical and symbolic reasons. This response is in line with well-known historical patterns. For example, Bismarck famously utilized social insurance as part of his "carrot and stick" anti-socialist strategy in 1880s Germany. Generally, early social reforms can be interpreted as a sort of "revolution-insurance" (Alber 1982). After all, the first reforms in welfare pioneering countries like Germany, Austria or Denmark were introduced by Conservative governments and not by the Left (ibid.). In a similar vein, based on our novel dataset, we find that most welfare ministries were introduced by Conservative or Liberal governments rather than under left-wing governments (see footnote 13).

Between 1918 and 1920, the world also witnessed a global influenza pandemic, the so-called *Spanish flu*, which infected almost a third of the world's population and killed millions (Simonsen et al. 2018). The flu mainly killed younger people and consequently had a huge impact on the demographics of populations and the development of public health measures. Countries addressed the deadly threat through a combination of containment, isolation, public hygiene and other measures to prevent the spread of the flu. The struggle against the Spanish flu also furthered international cooperation in recognition of the need to coordinate public health across nation-states, as contagious diseases like the flu did not respect national borders. In 1919, for example, an international bureau for fighting the pandemic was opened in Vienna. Addressing pandemics and other infectious diseases, such as tuberculosis, resulted in state intervention, expanding the role of states in health care and public health, and in some countries, leading to the establishment of new ministries of health. In Canada, the combined urgency and politicization of the Spanish flu led to the establishment of the Department of Health in November 1918. In other countries, such as New Zealand, health ministries expanded as part of post hoc evaluations of what was often considered lacking policy responses (Rice 2005).

The establishment of a new international post-war order after both world wars also included border revisions, as new nation-states emerged from the collapse of old empires. Regime changes also took place. Hence, *state collapse and state-building* might have prompted the formation and proliferation of welfare ministries. For example, the Austrian-Hungarian Empire collapsed following WWI. The western (Austrian) part of the multicultural dual-monarchy was transformed into new European nation-states such as (German-)Austria, Czechoslovakia, Poland, and the Kingdom of the Serbs, Slovenes and Croats. Since the Austrian part of the Habsburg Empire was a welfare state pioneer and had already established a welfare ministry in late 1917[15], all these successor states immediately established similar national welfare ministries right after gaining independence. Further north, the Baltic countries and Finland gained independence from Russia between 1917 and 1918, and their state-building efforts brought about the need to set up a national

[15]Note that the Austrian and Hungarian part of the dual monarchy regulated and administered social policy autonomously. Both halves of the empire therefore had their own social ministries.

administration that would include welfare.[16] Welfare ministries were thus established in Finland (Ministry of Social Affairs, 1917), Hungary (Ministries of Social Affairs and of Labour, 1917), Latvia (Ministry of Labour, 1920), and Estonia (Ministry of Labour and Welfare, 1918).

In an effort to secure peace via international cooperation, the establishment of a new post-war order also involved new organizations at the international level, such as the League of Nations and the United Nations, respectively. As pointed out by Wallin (1969), the founding of the International Labour Organization (ILO) in 1919 (see Kott and Dreux 2013), part of the post-war settlement enshrined in the Treaty of Versailles, was a response to the horrors of war, which was itself a driver for establishing national welfare ministries.[17]

We can conclude that a wartime crisis emerged from a complex interplay between warfare and war-related events and transformations, all of which set off shockwaves throughout the world. All these factors interact and feed into the time effect found in the previous section. Consequently, they cannot be easily separated.[18] Moreover, the impact of these events was conditioned by domestic politics and national contexts that influenced the exact timing of the establishment of welfare ministries, as well as the specific types of ministries that were established. Administrative legacies, pressure from socio-economic problems, and the political landscape of actors and state structures are important in this respect.

Disentangling the effects of wartime events on the establishment of welfare ministries

In this section, we qualify the wartime effect by considering the temporal sequence of events and asking whether the Bolshevik Revolution, the Spanish flu pandemic, state collapse, or the establishment of the ILO could have occurred without the background of total war.

The Bolshevik Revolution cannot be easily separated from the Great War (Holquist 2017; Wade 2017). The Russian Empire was part of the European state system, and Czar Nicholas II's decision to enter the war had dramatic consequences for Russia. Millions of Russians were killed, and living conditions and industrial production deteriorated. This led to social tensions and increasing unpopularity of the Czar. Even though the revolution reflected latent and deep social conflicts in Russian society, the overthrow of the Czar in March 1917 is clearly attributable to the war, as was the Bolshevik takeover in November 1917 (Fitzpatrick 2008). In short, the Bolshevik Revolution occurred only *after* the Great War had taken its horrific toll on European nation-states, including Russia (Holquist 2017).

Even though the origin of the Spanish flu is still debated, it is beyond doubt that the spread of this disease and the subsequent pandemic was closely connected to

[16]Given the close nexus between state-building and the formation of welfare ministries, the countries of Eastern Europe were not included in the statistical analysis in section 4.

[17]Note, however, the ILO membership turned out insignificant in our statistical analysis.

[18]For example, it is plausible that only a specific wartime event (e.g. the Spanish flu or ILO influence) was important for the formation of a ministry in a particular country, whereas war-induced destitution or other wartime events (e.g. a growing communist threat or state-building) triggered the build-up of a welfare bureaucracy in other countries.

WWI (Simonsen et al. 2018; Spinney 2017). The Spanish flu pandemic has even been referred to as a "war disease" (Kamradt-Scott 2012). The deployment of thousands of soldiers in camps and overcrowded military hospitals, wartime shortages of food supplies and poor communication due to wartime press censorship provided the perfect breeding ground for the spread and circulation of the influenza virus as early as 1916–17 (Simonsen et al. 2018). War conditions also contributed to increased death rates due to the virus, as many soldiers, weakened by malnutrition and stress, had fragile immune systems. Infected soldiers returned home from battlefields and camps, further spreading the virus and leading to millions of deaths across the world, with the pandemic unfolding in three distinct waves between 1918 and 1920 (Kamradt-Scott 2012). Casualties from the Spanish flu are estimated to have exceeded war casualties; however, it is highly unlikely that the pandemic would have had a similar impact without the population dislocations and fragile infrastructures of WWI. Furthermore, this pandemic was not the only threat to public health caused by the war. Tuberculosis was also rampant in many countries, as were venereal diseases, and here, too, there is clear evidence that wartime social misery and prostitution behind the front lines contributed to the massive spread of these diseases (Drolet 1945; Steward and Wingfield 2016).

In addition, the war also caused the collapse of empires and states, and the related formation of new nation-states that the inherited welfare ministries from former empires. With the military defeat of the Central Powers, the victorious Allied forces redrafted the maps of Europe in 1919 (and again in 1945). In addition, war and state-building in many cases became drivers of democratization processes. In fact, democracy was a statistically significant factor behind the formation of welfare ministries beyond the wartime variables (see Table 2 above).

The case for world events stimulating the formation of welfare ministries is straightforward with respect to the ILO, given that the ILO was part and parcel of the Versailles Peace Treaty in 1919. The ILO was the first agency to be established under the League of Nations, the goal being to ensure future peace by promoting social policy reform and international collaboration in social policy (Kott and Dreux 2013).

Furthermore, Figure 1 supports our argument that war matters. The establishment of welfare ministries strongly clusters around the years of WWI and to a lesser degree around WWII. It is therefore striking that the major transnational shock of the 1930s, the Great Depression (1929–33), had little effect on the formation of welfare ministries, notwithstanding the Depression having led to new public works and large-scale social programs in several countries.

In sum, our analysis finds that total war is the root cause for the time effect identified in the empirical section. This does not mean that we dismiss the importance of the Bolshevik Revolution, the Spanish flu, state collapse, or the founding of the ILO. These crucial historical events were factors in the decisions to establish welfare ministries in different nation-states. These events not only increased pressure to act, they also opened a window of opportunity for policymakers to alter the organization of government and to establish new agencies and ministries at the national level. We nevertheless claim that war is the main cause underlying the establishment of welfare ministries. These events (and related mechanisms), together with

domestic war-induced turbulences, should be viewed as parts of a cumulative wartime crisis which explains the period effects identified in our regression analysis.

Conclusion

Since the 1970s, statist approaches in comparative public policy research have emphasized the importance of national welfare bureaucracies for understanding welfare state development (Heclo 1974; Skocpol 1985). However, there has been little interest in investigating those factors underlying the formation of welfare ministries. National historical case studies typically offer comprehensive descriptions of administrative reform, or they focus on the underlying political contexts and bureaucratic traditions (e.g. Antonsen 2001; Bargeton and Ziegler 1971; Gutheil-Knopp-Kirchwald 1998). Yet systematic comparative research tends to overlook the emergence of welfare ministries, focusing instead on the gradual expansion of state functions (Marquez and Joly 1986; Rose 1976) or the spread of international norms in the post-1945 period (Strang and Chang 1993; Thomas and Lauderdale 1988).

Following arguments by Wallin (1969: 60) on how WWI influenced the establishment of labor ministries, we have offered an alternative explanation: that war itself was a major driving force behind the formation of welfare ministries, enhancing state capacities and driving administrative reform. Based on our new dataset for 30 countries, we have shown that in line with hypothesis 1, 70% of the countries created independent welfare ministries during or immediately after the Great War. Next, we use regression analysis to examine the influence of war over other factors, controlling for domestic and international determinants that might account for the establishment of welfare ministries. Our findings suggest that the establishment of welfare ministries is unrelated to a nation's actual war experience (measured by the length of war, war-induced destruction, and the number of war casualties). Rather, the establishment of welfare ministries, contradicting hypothesis 2, is a product of the same set of severe wartime turbulences that affected many countries at the same time, thus supporting hypothesis 3.

This transnational wartime crisis was nurtured and exacerbated by the political, economic, and social shockwaves unleashed by total war, what we call the "wartime effect." To further refine this wartime effect, we discuss several factors of international importance, such as the Bolshevik Revolution, the Spanish flu and other communicable diseases, post-WWI state collapse and state-building, and the founding of the ILO by the League of Nations. All four of these events have been addressed in the literature as influencing social policy reforms. However, we have shown that they are but derivative of the upheaval caused by the Great War. Hence, it is the war which constitutes the main driving force (the root cause) for the establishment of welfare ministries. This finding is in line with a well-established body of literature emphasizing the impact of interstate war on state centralization and the build-up of state capacities. In this case, the state capacity that was built up became the capacity to administer welfare services to a war-torn population.

However, we still need deeper and more systematic knowledge about the specific national processes leading to the establishment of welfare ministries. While the war

effect is the main cause, the timeline, organization and profile of the welfare ministries varies with each country. Hence, we need to ask how exactly did war (time) conditions lead to the establishment of new welfare ministries in so many countries during roughly the same period? We have demonstrated here that the standard theories in comparative public policy cannot explain the establishment of welfare ministries. Nevertheless, much discussed "classical" variables, such as economic growth, the strength of the Left, or welfare maturity might certainly have been influenced by war-related mechanisms in different and complex ways. This is in line with Skocpol's reservations (1985: 14) that state autonomy "is not a fixed structural feature of any government system. It can come and go." We thus agree with Pierson's caveat (2005: 43) that long-term effects "should often be seen as the *by-products* of social processes rather than embodying the goals of social actors." Disentangling the causal chains and specific mechanisms, as well as their interplay and variation due to specific national and international contexts, calls for in-depth qualitative historical case studies.

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