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Empowered for Action? Capacities and constraints in sub-state government climate action in Scotland and Wales

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Abstract

Sub-state governments have emerged as important sites of climate policy innovation, but their capacity for action has rarely been examined. Although they are devolved regions within the same state, Scotland and Wales have varying degrees of constitutional competence. We conduct an inter- and intra-regional comparison to examine whether constitutional competence shapes the scale of ambition and achievement in climate policy outputs and outcomes. Focusing on emission reduction programmes and renewable energy, while there is a clear relationship between constitutional capacity and policy ambition, it is more evident in the capacity to deliver than in policy ambition. Other factors, such as civil society strength and the politics of territorial distinctiveness, also matter in shaping ambition, in spite of limitations in decision-making autonomy.

Key words: climate change, regional governments, capacity, climate action, Scotland, Wales

Introduction

While nation-states have struggled in recent years to work collectively and sometimes individually to pursue ambitious climate change mitigation, sub-state nations, regions and cities have emerged as important sites of climate policy innovation. Networks such as the Climate Group's State's and Regions Alliance, the Network of Regional Governments for Sustainable Development and C40 Cities promote ambitious climate action in regions and metropolitan cities. Sub-state governments are increasingly positioned as critical to achieving climate change commitments; the UNDP estimates that 50-80% of actions required to implement a global climate change agreement relate to sub-state

competences. Not all sub-state polities are ambitious in this policy sphere. Leaders and laggards are as evident at the sub-state level as among nation-states. National and sub-state authorities vary in the extent to which they demonstrate political will, or face political pressure, to promote low carbon innovation, and are incentivized or constrained in their policy choices by their perception of the economic gains and losses that such action entails (Scruggs 2003, Jänicke 2005, Sippel and Jenssen 2010). In contrast to nation-states, however, sub-state authorities have less *capacity* for action. Jänicke (2005, pp. 132-3) has asserted that *nation-states* are uniquely placed to pursue ambitious environmental policies because of their relatively high policy capacity with respect to financial resources, personnel, professional competence and coercive power. Regions, as a rule, have fewer capacities, at least *within* their national settings; a powerful region such as California may have more capacity than a smaller European nation-state and certainly more than nation-states within the developing world, but it still has fewer material and institutional resources at its disposal than the US federal government. Yet, there is significant variation in the capacities of sub-state regional authorities, which may in part explain variation in the extent to which they are empowered to act in the climate arena.

Here, we focus on the extent to which variations in capacity can explain variations in policy outputs and outcomes in Scotland and Wales. We focus on constitutional capacity, derived from the constitutional distribution of legislative and executive powers to the sub-state level. Constitutional asymmetry within the UK allows us to examine the impact of our key variable while holding the nation-state context constant. We can also control for the effect of economic development, considered a key driver of environmental ambition (Börzel 2002); Scotland is more prosperous than Wales on most measures, but not dramatically so when prosperity levels are considered in a broader comparative context. Successive Scottish and Welsh governments have also operated in the context of similar ideological and territorial political environments, and have espoused similar rhetorical commitments to being at the forefront of climate action. However, there remain marked variations in their constitutional autonomy and their institutional resources. The Scottish Parliament was founded in 1999 with primary

legislative powers in a wide range of policies associated with climate action, though there are some crucial areas of policy – notably, energy regulation, taxation and EU/international representation – which to date remain the preserve of the Westminster parliament and government. The National Assembly for Wales initially lacked primary legislative power in any field. Although its powers have gradually increased in the intervening years, especially since 2011, they remain more circumscribed than those of its Scottish counterpart.

We examine the central hypothesis that constitutional capacity relates positively to climate ambition. We do so by sub-dividing this hypothesis to examine the effect of constitutional capacity within and between the cases. First, we expect that climate ambition, with respect to both policy outputs and policy outcomes, will be higher in Scotland than in Wales, given the former's greater constitutional capacity. Second, we hypothesize that within each case, climate outputs and outcomes will be more ambitious in those policy spheres where the region in question has stronger constitutional autonomy than in spheres where autonomy is lacking. Our analysis suggests that, while constitutional capacity has some explanatory power for climate ambition, especially in relation to the capacity to realize policy goals, ambition is supported and motivated by other factors too, including the strength of civil society and territorial distinctiveness.

Capacity for Climate Action

Despite the growing recognition and attention to sub-state climate action, *capacity* for action has been under-investigated. Some studies have observed the underlying economic motivations behind sub-state climate policy innovations, including a desire to exploit expanding markets and assume market advantage in new technologies and fields (Engel and Orbach 2008, Rabe 2008, Engel 2009, Bulkeley 2011). Some regions are motivated by awareness of the urgency and the effects of climate change (Byrne *et al.* 2007). Political motivations, derived in particular from the multi-level context in which sub-state authorities must operate, include gaining 'first mover advantage' over other regions, just as

some EU member-states were able to do in a European context, thus shaping the emerging EU role in the climate arena to suit their preferences and goals (Héritier 1994, Liefferink and Andersen 1998). Sub-state governments may also be motivated by the desire to play a leadership role nationally and internationally, engaging in ‘paradiplomacy’ in spite of their lack of constitutional authority for external affairs in forums such as the Network of Regional Governments for Sustainable Development (nrg4sd) (Happaerts *et al.* 2010). Inaction at national or federal level can generate the political opportunity to act, providing space for policy innovation within and across lower levels of government. This has been a particularly powerful explanation for innovation among US states, especially in the George W Bush era, with some states introducing ambitious emissions reduction programmes, collaborative cap-and-trade schemes and ‘renewable portfolio standards’ to facilitate and incentivize the transition away from fossil fuels (Rabe 2007, Engel 2009). Existing accounts also recognize the extent to which bureaucratic resources and strong policy networks can strengthen the capacity for sub-state governments to act on climate change (Byrne *et al.* 2007, pp. 4566-67, McEwen and Bomberg 2014).

The degree of constitutional capacity enjoyed by a sub-state regional authority is rarely discussed in the literature. This may be because most studies take place within national contexts where constitutional power is commonly symmetrically distributed. Yet, the constitutional division and allocation of powers represents a clear source of decision-making autonomy. Multi-level systems vary in the balance of power between the central or federal level and the regions, depending on whether the latter’s powers are constitutionally entrenched, and the scope for regional authorities to make policy decisions without the intervention of the central/federal level. In the classic federalism literature, a distinction is made between federal or confederal systems and regionalized or devolved systems. In the former, sovereignty is divided between layers of government, and policy autonomy is entrenched in the constitution. In the latter, powers are devolved from the centre, and the centre remains the dominant player with the legal authority to withdraw regional policy competences (Héritier and Lehmkuhl 2008; Bolleyer, *et al.*

2014). Within these broad categories, however, the degree to which regional institutions can make decisions varies substantially, depending on the policy field under its jurisdiction and its constitutional and economic capacity to tax and spend (Hooghe, *et al.* 2008). The greater the constitutional and fiscal power of regional governments, the greater should be their capacity to engage in autonomous policy-making in fields under their jurisdiction.

As a relatively new policy field, ‘climate change’ is not easily demarcated constitutionally. Even in the UK, where constitutional power was devolved to Scotland and Wales at the end of the 1990s, there was no consideration of climate change as a specific area of policy responsibility when determining the respective powers of Westminster and the devolved institutions. Across all multi-level states, the policy fields implicated span the constitutional jurisdictions of central and regional government, with important supranational and local responsibilities too. As a result, sub-state regional authorities will have constitutional capacity to act in some areas of climate policy but not in others, potentially affecting the extent to which they can demonstrate climate ambition.

The degree of constitutional capacity enjoyed by sub-state governments in the climate sphere varies significantly across cases. Some sub-state governments, like the Canadian provinces and Australian states, have jurisdiction over energy policy, and thus capacity to shape energy markets, while in most European nation-states, energy policy is mainly the preserve of national government. Those regions with jurisdiction over energy policy may have more capacity to be ambitious – or obstructive – than those who lack such policy competence. In some multi-level states, the primary responsibility of the sub-state level is to implement decisions taken at higher levels, limiting the scope for sub-state innovation. Sub-state governments with high levels of ‘shared power’, as in Belgium and Germany, can shape, or obstruct, national decision-making. Jörgensen (2012) suggested the degree of self-rule - the capacity to make decisions autonomously - is central in determining the potential for climate experimentation, while Happaerts (2012a), reviewing the Belgian case, argued that a high level of

constitutional capacity will not by itself be a sufficient driver if other political and economic motivations are lacking. But the *lack* of constitutional capacity can be expected to represent a barrier to action. Where sub-state governments lack the constitutional power to act, they may be obliged to comply with national decisions or frameworks, or voluntarily converge with such frameworks.

Whilst we focus here on assessing the effect of the presence or absence of constitutional power, our analysis is informed by recognition that capacity for action is aided and constrained by other factors too. Across a variety of policy spheres, scholars of multi-level governance have observed that sub-state governments can overcome limitations of their formal constitutional power, for example, by nurturing and accessing policy networks and expertise to strengthen their policy development and claim a stake in a policy sphere, or rely upon their economic and other resource strengths to claim expertise and special status, or, by utilizing the skills and entrepreneurialism of talented political leaders, exert influence in a policy field which surpasses their constitutional autonomy (e.g. Rhodes 2007, Piattoni 2010, Bolleyer *et al.* 2014). In the climate policy sphere, natural resources can compensate for lack of constitutional powers, especially in relation to energy policy, and provide the economic motivation for low carbon policy innovation.

The capacity for climate action may also be influenced by a variety of less tangible political factors, including ideology, political strength and territorial distinctiveness (Rhodes 2007, McEwen and Bomberg 2014). The latter is particularly relevant to nations and regions within multinational states. Drawing upon and emphasizing territorial distinctiveness can provide a tool to governments seeking to enhance their own democratic legitimacy and to challenge the legitimacy of central government to act on behalf of the territorial community in question. These claims to territorial distinctiveness often go hand-in-hand with demands for greater political autonomy, encouraging governments in sub-state nations and regions to engage in policy making, across different policy spheres, which is at or even beyond the boundaries of their constitutional powers (Agranoff 2004, Keating and McEwen 2005).

Several authors examining sub-state climate action have observed the influence of territorial assertiveness and nation-building aspirations in the active and visible role played by ‘national’ regions such as Québec, Flanders, Catalonia, the Basque country, Scotland and Wales in domestic intergovernmental relations and within international networks for sustainable development and climate change mitigation. These forums help them to nurture an image as defending and advancing national interests, and provide an opportunity to develop a profile on the world stage as well as enhance their status with a home audience (Galarraga 2011, Happaerts 2012b, Happaerts *et al.* 2012, McEwen and Bomberg 2014).

Methodology and Case Selection

We explore the over-arching hypothesis, derived from the discussion above, that constitutional capacity shapes the level of climate ambition. We sub-divide this hypothesis in two. We posit that regions with greater constitutional power will be more ambitious in their climate policy action than regions that lack constitutional power. The former have a more extensive range of policy instruments at their disposal to realise their ambitions, can enact legislation to effect change in the behavior of citizens, businesses and public authorities, and may be in a position to incentivize the low carbon transition through regulation, legislation, revenue-raising and targeting resources towards distinctive climate goals. The multi-level nature of climate policy means that, in all cases, a sub-state government will have the constitutional autonomy to act in some climate spheres but not in others. We also hypothesize that sub-state governments will demonstrate more policy ambition in policy areas where they have stronger or clearer constitutional powers than in those where power primarily lies within the jurisdiction of the central government and parliament.

The level of climate ambition is assessed in two dependent variables derived from these hypotheses: policy outputs and policy outcomes. Policy outputs are the programmes, targets, and legislation that define the scale of ambition being pursued. We focus on two types of policy outputs: GHG emissions

reduction programmes, and commitments to renewable energy, both of which are central to climate policy and indicative of the level of climate ambition. Policy outcomes are the results of policy initiatives in these fields, including the extent to which targets are met and change is effected. In the arena of climate change mitigation, programmes and targets are often long-term and so, whilst progress cannot be fully gauged at this stage, there is enough evidence to assess whether interim objectives are being met and governments are on track to achieving their long-term goals. Our key independent variable is constitutional power, which is assessed by the legal competences attributed to sub-state regional parliaments and governments.

The relationship between these variables is examined in a comparative analysis of Scotland and Wales, using a most similar systems design. The similarity between the cases allows us to control for extraneous variance by holding a range of other potentially influential variables constant. As devolved regions of the same state, Scotland and Wales operate within the same national policy framework, and are similarly affected and constrained by the requirements of the EU Energy and Climate Change package and environmental law. As regions within a devolved state, they lack the entrenched sovereignty characteristic of regions within federal states. Both Scotland and Wales are economically advanced democracies, albeit that Scotland performs somewhat better than Wales on most economic indicators.¹ They share similar political cultures: both can be characterized as centre-left, with a parliamentary representation at UK level that (until 2015) was dominated by the Labour Party, and both have a clear territorial dimension to party competition. Where they differ is in the level of territorial distinctiveness and party strength, as illustrated by the relative success of their respective nationalist parties, the Scottish National Party (SNP) and Plaid Cymru. From 1992 to 2010, the SNP consistently gained around 20% of the Scottish vote in UK general elections, while Plaid Cymru polled around 10% in UK elections. Their relative strength has been made even more stark by their respective performances in the 2015 UK election (50% for the SNP and 12% for Plaid). Within the devolved assemblies, the SNP has been the largest party since 2007, and the sole party of government (as a

minority government from 2007-2011 and with a majority thereafter). Plaid Cymru's only experience of government was as a junior coalition partner to the Labour Party from 2007-11, which was, followed by a drop in electoral support that reduced them to third-largest party in the National Assembly for Wales (having previously been the second strongest party since the Assembly's formation in 1999).

In contrast to most multi-level states, the UK is characterized by constitutional asymmetry. Notwithstanding the significant changes to strengthen the autonomy of the National Assembly for Wales since 1999, the Scottish Parliament continues to enjoy greater constitutional autonomy, including in the portfolios most implicated in climate policy. The Scottish Parliament can legislate in all fields except those explicitly listed as 'reserved matters' in the Scotland Act, and so has autonomy to act on environment, waste management, land use, most areas of transport, housing, planning regulations, and the *promotion* of renewable energy and energy efficiency. Welsh devolution operates on a conferred powers model, specifying, and thus constraining, the areas of Welsh autonomy. Initially, the UK parliament retained all primary legislative powers with secondary legislative powers devolved in eighteen pre-defined areas. Since 2011, the National Assembly has had primary legislative powers in twenty areas, including climate-related areas such as environment, housing and economic development, but Wales does not yet constitute a distinctive legal jurisdiction. The key enabling power in the climate arena has been the statutory sustainable development duty, which legally obliges Welsh Ministers to promote sustainable development across government functions.

Significant constitutional constraints have faced both Scotland and Wales in relation to energy policy. Responsibility for the generation, transmission, distribution and supply of energy remained a matter for the Westminster government and parliament in both devolution settlements. The UK government has therefore set the policy framework for energy, and the UK regulator, Ofgem, oversees the energy market. However, Scottish autonomy has been enhanced by powers that were executively devolved. These include the power, derived from the 1989 Electricity (Scotland) Act, to grant or withhold

planning consent for the construction of overhead transmission lines and new generating stations, *in excess of* 50 megawatts (MW) for onshore wind farms, coal, gas fired or nuclear power stations and *in excess of* 1 MW for offshore wind farms and (prior to 2011²) hydro-electric power stations. The Scottish Government also operated its own Renewables Obligation, the principal mechanism for promoting industry investment in renewable energy throughout the UK, though this power has been eroded by Electricity Market Reform which replaces the RO with a system of ‘contracts for difference’ on a Great Britain-wide basis. Welsh energy consenting powers have been much more limited than those in Scotland. The Welsh Government³ has been unable to consent to large-scale energy generation as its executive powers remain confined to consenting to schemes under 50MW onshore and 1 MW offshore, and it had no capacity to design a Welsh Renewables Obligation. The executive powers of the Welsh Government relating to electricity planning consents remain equivalent to those afforded to local planning authorities in Scotland.

Table 1: Hypothesized capacity to be ambitious in climate policy

	Emissions reductions	Energy
Scotland	+	-
Wales	-	--

+/- signs symbolise expected levels of ambition

Table 1 depicts the hypothesized effect of these variations within and across our cases. If greater self-rule coincides with more ambitious climate action, as we hypothesize, we would expect Scotland to have higher climate ambitions, expressed in climate policy outputs, than Wales, and we could also expect that capacity differences in self-rule would place Scotland in a more advantageous position to have made most progress in achieving policy outcomes. Further, *within each case study*, we would

expect the devolved governments to have higher ambition and to have made most progress in emissions reductions, where their constitutional competence has been less constrained than in the energy field.

These expectations are examined in the empirical sections below. The evidence is based on analysis of a wide range of documentary sources, including central and sub-state government reports, reports of the UK Committee on Climate Change and the Climate Change Commission for Wales, backed up by 49 semi-structured elite interviews with officials, serving and retired government ministers, and representatives from the broader policy community. The purpose of interviews was to enhance our knowledge of policy developments, to gain insight into the scope for autonomous decision-making and the opportunities and constraints imposed by constitutional and non-constitutional variables, and the barriers to progress, rather than for the purposes of any discourse analysis.

Climate Policy Output in Scotland and Wales

Climate action in Scotland and Wales has developed alongside UK action. In contrast to their US counterparts, the UK's devolved governments have not been kick-started into action by the inability or unwillingness of the national government to act. The key framework for emissions reductions is set at the EU level, with member states allocated national reductions targets. The UK Climate Change Act 2008 - the world's first national mandatory climate change mitigation legislation - was embedded within this European context, but not restricted by it. The devolved administrations were signatories to an agreement accompanying the UK Act, and the UK and Scottish governments, in particular, have been partners in pushing for more ambitious emissions reduction policies within the EU and internationally (McEwen and Bomberg 2014, interviews). Yet, both Scotland and Wales nonetheless carved out distinctive and ambitious platforms of their own.

Climate Ambition in Scotland

The Scottish government has shared the long-term ambition of the UK government, but successive

Scottish administrations have sought to exceed UK targets. The 2009 Climate Change (Scotland) Act, passed unanimously by the Scottish Parliament, is more ambitious than the 2008 UK Act, with harder targets and broader reach. It imposed a statutory obligation on the Scottish government to reduce all greenhouse gas emissions, including emissions from aviation, by 42% by 2020 and 80% by 2050 (on a 1990 baseline), with *annual* targets towards these goals.⁴ It provided a legislative framework to regulate the activities of government, the private sector and individuals and covered a vast array of devolved policies, including forestry, land use, the promotion of energy efficiency, waste reduction and recycling, as well as provisions for adapting to climate change. The 2009 Act has been widely recognised as one of the most ambitious emissions reduction targets in the world, and frequently promoted as such in ministerial speeches.

The promotion of renewable energy has been a key component of the Scottish government's climate change programme, especially since the election of the SNP. In 2008, the SNP government set a target of generating 50% of Scottish demand for electricity from renewable sources by 2020. By 2011, the 2020 target had increased to sourcing *the equivalent of 100%* of Scotland's electricity consumption from renewables, thought to equate to around 14 GW of installed capacity, compared to actual installed capacity of 4.6 GW in 2011, and supported by a commitment to reduce energy demand (Scottish Government 2011a). The Scottish government aims to source 30% of all energy demand from renewables by 2020, a level of ambition on a par with Denmark (30%) and Portugal (31%), but notably higher than most other EU member states, and higher than the overall UK target (set by the EU) of 15% of all energy from renewables by 2020 (McEwen and Bomberg 2014). Although small in relation to the overall target, the Scottish government has taken a lead in the UK in setting a specific 2020 target of generating 500MW of electricity from community or locally-owned generating stations. It also has a specific and ambitious (given that in 2010 the figure stood at 2.8%) target to source 11% of heat demand from renewables by 2020. The Scottish government placed renewables targets at the heart of its economic development strategy, and regarded the low carbon revolution as a means by which

Scotland could gain recognition internationally as the 'green powerhouse for the continent of Europe' (Salmond 2012).

These policy outputs point towards a high level of ambition, but it is not altogether clear that variation in constitutional competence provides an explanation. The scale of ambition and leadership is at least as evident in the renewable energy programme as in the broader emissions reduction programme, in spite of the Scottish government's lack of constitutional capacity in energy policy. The lack of constitutional autonomy has nonetheless created some obstacles toward the realization of these goals, as discussed below.

Climate Ambition in Wales

The Welsh government has also established challenging emission reduction targets and explicitly presented climate change as the world's greatest environmental, economic and social global challenge (WAG 2010b). In 2007, the 'One Wales' Labour-Plaid Cymru coalition established a non-binding target to reduce carbon-equivalent emissions by 3% per year in areas of devolved competence from 2011, the first government in the UK to set annual reduction targets (WAG 2007, p. 31). The 3% target included all 'direct' greenhouse gas emissions in Wales, except those from heavy industry and power generation covered by the EU ETS. The longer-term target was to reduce all greenhouse gas emissions in Wales by 40% by 2020 (on a 1990 baseline) (WAG 2010a). To this end, a Climate Change Strategy was developed with separate emissions reduction and adaptation delivery plans. Integral to Wales' strategy is that EU and UK-level action directly contribute to realising the 3% target and the strategy anticipated that 40% of actions would be met by measures at these higher levels.

Like its Scottish counterpart, the Welsh government has expressed ambitions for Wales as a 'global centre for energy' (WG 2012, p. 5). In 2005, it committed to a '4 TWh per annum renewable electricity production target by 2010 and a 7 TWh target by 2020' - roughly equivalent to 2.7GW of installed

capacity (authors' calculation, WAG 2010c, p. 10). The 2010 Energy Policy Statement estimated Wales' potential to achieve a massive 22.5 GW of installed capacity by 2025, expressed as 43 kilowatt hours per day per person. This included 8.5 GW of tidal range capacity (half of which would be shared with England), 4 GW of tidal stream/wave power and 6 GW of offshore wind (one-fifth of which would be shared with England) (WAG 2010b). The policy statement explicitly acknowledged the need to work with others, especially the UK government, to realise this potential. For its part, the Welsh Assembly government set aims rather than targets, which varied in their specificity. For example, in tidal range, the policy aim was expressed vaguely - 'to test the appropriateness and cost effectiveness of steps to exploit the tidal range of the Severn estuary' - whereas in tidal stream/wave it is 'to capture at least 10% (8 kWh/d/p) of the potential... energy off the Welsh coastline by 2025' (*ibid*, p. 14). By 2050, the ambition was to ensure that almost all of Wales' local energy needs could be met by low carbon electricity production. The ambition was clear, even if the route to achieving it was less clear: 'Wales once led the world in carbon-based energy. Our goal now is to do the same for low carbon energy' (WAG 2010b, p. 4).

The Scottish and Welsh governments have clearly set themselves up to be more than simply implementers of central government policies. Their policy outputs and targets reflect their aims to be pioneers of climate policy, and neither appears to be hampered in their ambition by a lack of constitutional capacity. As expected, given the differences in their respective constitutional powers, the scale of ambition is greater in Scotland than in Wales. This is evident in the statutory underpinning of many of the Scottish outputs, the specification of targets and performance indicators, their associated financial investments, and the long-term targets and detailed route maps to achieving them. However, as in Scotland, the ambition in Wales is most evident with respect to renewable energy, despite the limited autonomy of devolved institutions in Wales beyond small-scale initiatives. Indeed, Welsh aspirations to harness natural resources to produce renewable energy are even higher than those

expressed by the Scottish government. Perhaps the real test of the relationship between ambition and power will be seen in policy implementation and the attainment of policy goals.

Climate outcomes in Scotland and Wales

Ambitious targets can be difficult to deliver, particularly for authorities with limited constitutional capacity. Yet, despite the contrasts between their high-level ambitions and capacity constraints, the evidence to date suggests that both Scotland and Wales have made at least partial progress towards realizing their goals.

Scotland

Greenhouse gas emissions in Scotland fell by 21.2% between 1990 and 2011, but there was recognition that securing the additional 21% reduction needed to meet the 2020 target would require new policies, not all of which fall within the current constitutional competence of the Scottish government (Scottish Government 2011b). In particular, because the Scottish target covered all emissions, not just those within devolved competence, it may be unachievable in the absence of an increased EU emissions reduction target from 20% to 30%; the EU traded sector, whose emissions are regulated by the EU emissions trading scheme, accounts for around 40% of all emissions in Scotland (CCC 2013c). Critics argue that more could be achieved domestically. Indeed, the government failed to meet its first two annual emissions reductions targets, set in accordance with the Climate Change Act. However, the UK Committee on Climate Change put the failure of the first target down to the exceptionally cold winter, and confirmed the overall trend towards emissions reductions, praising government initiatives to eliminate waste, reduce energy demand and tackle fuel poverty through investment in home insulation, and the acceleration of renewable power and heat (CCC 2013c).

There is little doubt that Scotland has become a front-runner in renewable energy, hosting 38% of the UK's installed renewable electricity generation capacity in 2012, including almost 90% of UK hydro capacity and 44% of onshore wind (DECC 2013; Scottish Government 2014). Between 2003 and 2011, renewable capacity in Scotland increased by 187%, and generation from renewables by 269%. By 2012, renewables contributed just under 30% of total electricity generation, which equated to 40% of domestic electricity consumption (Scottish Government 2014). Progress in renewable heat seems more modest, estimated at 2.6% of demand by 2012. These trends were supported by a range of government-led initiatives and investments, over and above those implemented by the UK government, to support innovation, technological development, micro- and community-scale generation, and improve infrastructure for offshore development, alongside a political and planning framework conducive to renewables. But there remains some way to go before the 2020 100% consumption target for renewable electricity and the 11% consumption target for renewable heat is reached.

Wales

To date, Wales has made good progress in hitting its headline emissions reduction targets. The 3% target was exceeded in 2011 with a 10% emissions reduction, and the 2012 target was also likely to be met (WG 2013, p. 14). However, considering the impact of the economic downturn and milder winter weather, the Climate Change Commission for Wales, the Welsh Government's independent advisory body, called for a 'step change' by diverting more attention and resources towards delivery (WG 2013, p. 49). The UK Committee on Climate Change continued to recommend a statutory basis for Wales' climate change targets to strengthen the incentives for emissions reduction (CCC 2013b).

Progress in realising renewable energy ambitions has been more limited. Between 2003-2011, renewable capacity increased by 116%, but at 929MW it represents just 6% of total UK renewable capacity (DECC 2013; CCC 2013a). Although in line with Wales' share of UK consumption, this is less than either the ambition or the landscape potential would suggest. Moreover, the rate of renewables

growth in Wales has been slower than elsewhere in the UK. This may in part be a consequence of lower approval rates for planning applications, especially for smaller scale renewables, which fell in Wales from 65% in 2011 to just 8% in 2012 (compared to 51% and 48% in Scotland in 2011 and 2012 respectively, and 51% and 44% in England; CCC 2013b, p. 90).

Policy outcomes, then, provide mixed support for our hypotheses. The power disparities between Scotland and Wales are associated with disparities in performance between the two nations – Scotland, which enjoys greater constitutional capacity than Wales, performs better. Within each case, the association between constitutional capacity and policy outcomes is less clear. As anticipated, Wales performs moderately better in realizing emission reduction targets, where the devolved institutions have a little more constitutional competence, than in energy where devolved powers are minimal. By contrast, while Scotland demonstrates more progress in both spheres, this has been most evident in its renewable energy outcomes, despite the restrictions on its constitutional capacity to act on energy policy.

Discussion

We began by hypothesizing that greater constitutional capacity will shape the level of climate ambition, measured in both policy goals and policy outcomes. We anticipated this to be apparent when contrasting Scotland and Wales, with the former's power advantages being evident in higher climate ambitions in policy goals, and higher achievements in policy outcomes. We also hypothesized that, in each case, variations in the degree of competence across policy fields would result in both outputs and outcomes being more ambitious in emissions reduction than in energy.

Our findings are summarized in Table 2, and only partially support the hypotheses.

Table 2: Evidence-based climate ambition in Scotland and Wales

	Emissions reductions	Energy
<i>Policy outputs</i>		
Scotland	++	++
Wales	+	++
<i>Policy outcomes</i>		
Scotland	+	++
Wales	+	--

+/- signs symbolise identified levels of output and outcome

Scotland's greater scope for discretionary decision-making has helped it to innovate, incentivize and further its distinctive agenda. The reserved powers model of devolution gave the Scottish Parliament an opportunity to develop its own climate legislation (since climate change was not specifically reserved in the Scotland Act), and Scottish governments have used executive powers over electricity to promote and incentivize a renewables agenda, for example, by changing the Scottish Renewables Obligation to give additional support to marine renewables, and streamlining the planning process to facilitate project development.

The Welsh government, by contrast, has been more dependent upon the UK government and parliament and thus had to give greater recognition to the multi-level and overlapping competences that have restricted its scope for taking its own distinctive action. In energy, in particular, Wales has been constrained, or 'disadvantaged' in the Welsh government's view (WG 2012, p. 5), by its limited competences, leading to growing demands to strengthen energy consenting powers, including responsibility for energy consents up to 100MW on land and sea (WG 2011). These demands have thus far been rejected by the UK government. The Welsh case underlines the difficulty in establishing

credible policy outputs and outcomes in climate-related policy areas where there is a lack of clarity regarding constitutional powers and few opportunities to use legislative levers as policy instruments.

Thus, there is a relationship between constitutional autonomy and climate ambition, but it is less than perfect, suggesting other factors also intervene to shape goals and outcomes. The research has led us to identify two additional variables: the strength of civil society; and the importance of territorial distinctiveness.

The first echoes the emphasis placed on policy networks in advocating climate action in US states. For example, Rabe highlighted the importance of policy networks when explaining the central role played by some American states in setting climate policy. State capitals were receptive to forming policy networks within which advocacy groups worked alongside policy entrepreneurs and legislators to advocate climate policy strategies and initiatives attuned to particular states (Rabe 2008, p. 107).

Scotland has long enjoyed a distinctive civil society, and this has strengthened since devolution. Policy-making and policy implementation involve extensive interaction with civil society actors, including from business and the third sector. In the climate arena, a cohesive and effective coalition of NGOs, church, labour and student unions (*Stop Climate Chaos Scotland*) lobbied political parties intensively, encouraging them toward the ambitious emissions reduction targets in the 2009 Act. A more elite Scottish Climate Change Business Delivery Group also put pressure on government to encourage ambition. In the wake of the legislation, its key figures established the 2020 Climate Group as a coalition of industry leaders, academics, trade union leaders, local authority chief executives and NGO leaders, to assist the Scottish Government in identifying and facilitating the changes in the public and commercial sectors necessary to realise Scotland's climate ambitions (interviews; McEwen and Bomberg 2014). The government is supported by an Energy Advisory Board, co-chaired by the First Minister, and involving officials from central and local government, business leaders, the scientific community, consumer organisations and trade unions. This, and its subsidiaries, both shape policy and

help to pave the way for its implementation (interviews, *ibid.*). Civil society in Wales is weaker and its role in facilitating climate action is less developed. Building on the broad coalition of organisations (*Stop Climate Chaos Cymru*), which lobbied for ambitious climate targets, the Climate Change Commission for Wales, set up in 2007, has acted to generate broader consensus around climate action and as a critical voice for government (interviews). Nevertheless, Wales started from a different basis to Scotland due to limited institutional capacity and relative lack of policy expertise within and beyond government. This is most clear in relation to renewable energy, where the renewables sector is smaller and less able to lend support, and in community energy in particular, where capacity building efforts are in their infancy.

The second variable underlines the importance of a territorial dimension to politics in sub-state nations like Scotland and Wales. This is evident in the distinctive national identity of ‘the people’, the distinctiveness of Scottish and Welsh political institutions, and nature of political competition, which in addition to left-right politics also features vibrant debates about the place and future of these nations within the UK, and their autonomy and influence vis-à-vis the UK government and parliament. This territorial dimension can frame debates over environmentalism and sustainability, for example, when discussing the *nation’s* natural resources, the exploitation of the land or the inter-generational implications of climate change for *our children* and *our people*. The nationalist parties in Scotland and Wales have at times fused nationalist with environmental discourse, as in 1992 when an MP was elected with joint Plaid Cymru - Green Party endorsement, coinciding with a stronger focus on ecological and environmental concerns in Plaid Cymru’s autonomy goals (Jones and Fowler 2008, see also Hamilton 2002).

Territorial distinctiveness and the politics of territorial identity can thus interact with the degree of constitutional autonomy especially in shaping the level of ambition in policy goals. Both Scotland and Wales are motivated at least in part by a desire to present their leadership in climate policy nationally

and internationally. In emissions reductions, for example, the Scottish government relished the opportunity to appear ‘a step ahead’ of the UK government (interview with special adviser), to demonstrate ‘the leadership we want to provide to the rest of the world’ (Scottish Government 2008, p. 11) and to be praised by leading global figures from Al Gore to Ban Ki-moon and Mary Robinson. Although the Welsh government had up until 2015 chosen not to introduce its own climate legislation, Welsh targets were presented as comparable with ‘more ambitious plans for emission reduction globally’ (WAG 2010a, p. 4) and as more challenging than the UK commitments (WG 2012, p. 17).¹ Wales’ prominent and active role in international climate action networks (nrg4SD and Climate Group) have provided international visibility and a platform for its climate change credentials (interviews, Royles 2012).

The territorial dimension links closely with the perceived limitations of constitutional capacity. In energy, in particular, the Scottish government has complained that its lack of constitutional competence over the regulatory framework in electricity acts as a barrier to achieving policy goals (McEwen 2013). For example, it had only a lobbying role to try to change what it regarded as an unfair transmission charging regime, which has imposed higher charges for grid connection in remote rural areas, and it had a consultative role only in relation to electricity market reform. The Welsh government has argued that complexity and overlapping competences in the planning system have exacerbated difficulties around planning and renewable energy, complaining that ‘it is anomalous that consents for large power stations are executively devolved to Scotland and not to Wales’ (WAG 2010b, p. 11). This position was partly acknowledged by the Commission on Devolution to Wales (2014), which recommended devolving all consenting responsibility below 350 MW to enable better development of Welsh energy resources, whilst retaining control of strategically important developments at the UK level. It also recommended parity for Wales with other devolved administrations in the forthcoming ‘contracts for difference’ system.

These debates, and climate ambition more broadly, should be understood in relation to the broader constitutional debates that are a dominant feature of politics in Scotland and Wales. For Scotland, the desire to maximize energy self-government is an end in itself, to enhance the capacity to shape ‘the totality of policy’, engage directly with the EU as a member-state, and gain credence among key players in the industry and internationally (interview with former minister). Being ambitious in establishing the incentives, infrastructure and drive to promote its bold renewables programme was at least in part intended to fuel the demand for Scottish self-government, and to ease concerns about its economic consequences after North Sea oil resources are exhausted. In Wales, calls for further energy powers have formed part of the Welsh Labour government’s pursuit of new constitutional arrangements with strengthened accountability and more effective devolved government. Vocal demands for further energy powers also reflected First Minister Carwyn Jones’ (politically strategic) willingness to publicly highlight disagreements with the UK government. This has been especially the case in the post-2010 context of total incongruence in the political composition of devolved and central governments, as well as the increased scope for conflict between both levels of government as a result of the post-2011 Welsh governance arrangements (the Government of Wales Act 2006 Part IV). Energy policy is one of the fields where both Scottish and Welsh governments have requested further constitutional powers. Whilst the case each makes has a clear rationale on grounds of climate action and economic development, demands for further powers are intertwined with broader claims to greater control over the political and economic future of the nations they represent, and are thus best understood as a feature of the territorial politics in which the UK state is embroiled.

Conclusion

Is constitutional capacity a key factor explaining variation in climate ambition among sub-state governments? Our analysis suggests a partial yes. We have demonstrated a relationship between the constitutional capacity to act and the scale of policy ambition. As hypothesized, the scale of ambition was more evident in Scotland than in Wales, and the Scottish government’s capacity to match ambition

with delivery was also apparent in most areas, at least in part because it enjoys greater legislative and executive powers in those fields which are key to climate policy. However, the overall relationship between our independent and dependent variables is more complex. In spite of its almost complete lack of competence in energy, Welsh ambition is evident with respect to long-term goals, although the lack of constitutional capacity to deliver on these goals is starkly evident. By contrast, one of the staggering features of the Scottish government in recent years is its achievements in developing and delivering the most successful and ambitious renewable energy programme in the UK, despite energy being a reserved matter under the devolution settlement.

Growing attention to sub-state government climate action is critical to understanding the multi-level policy responses to climate change globally. Sub-state governments have become increasingly visible and articulate in their climate action credentials in parallel to growing global recognition of their role. However, critical questions surround the potential gap between rhetoric and action. A focus on the constitutional power of sub-state regional authorities can help to explain why. The framework developed here could be used to examine climate action within and between other sub-state polities – indeed, an examination of constitutional capacity and how it interacts with other region-specific variables may also help to explain variation among sub-state governments in policy ambition and progress across other environmental policies. Not all sub-state governments are the same. Their constitutional powers and capacities for action vary considerably. Our evidence suggests that case and comparative studies of sub-state climate action would be enhanced by consideration of constitutional capacity as an explanatory variable underpinning climate action. Of course, it cannot be considered in isolation. As our analyses revealed, other factors can empower or disempower sub-state governments in pursuit of policy goals. In our cases, the strength of civil society enhanced capacity for action in Scotland, while in Wales its weakness made effective action more difficult. The territorial dimension of politics that is a feature of Scottish and Welsh politics, as it is in other strong identity nations and regions, helped to explain why the governments have been motivated to assert their distinctiveness

through climate ambition even where they lack constitutional power. Being ambitious and progressive has helped to raise the profile of these historic nations internationally, and allowed them to appear more progressive than their principal ‘other’, the UK government. Examining the impact of constitutional power on sub-state climate action, and ways in which it interacts with other key variables, can thus inform our understanding of why some sub-state governments are more ready than others to play a meaningful and progressive role in response to the increasingly urgent global challenge of climate action.

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Endnotes

1. GVA per head in Scotland was 94% of UK average in 2012; Wales was 72%. Scotland’s labour productivity and median earnings were higher than in Wales, while unemployment was lower - 7.2% in Scotland in 2013 and 8.2% in Wales. (ONS, 2013a; ONS, 2013b).
2. In 2011, the threshold for applications for hydroelectric generating stations was raised to in excess of 50MW, giving local planning authorities greater control over small scale hydro.
3. We use the different official terminology to refer to the Welsh executive, utilising Welsh Assembly Government for the 2002-11 period, and Welsh Government for post-2011.
4. The baseline is 1990 for CO₂, but 1995 for some other greenhouse gases. The 42% target was reached in the final stage of the legislative process, following pressure from environmental groups and a game of political one-upmanship with the opposition Labour Party.
5. . The Government committed to following Scotland and Northern Ireland’s suit by introducing statutory climate change targets in the Environment Bill to be brought forward during 2015.

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