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e-Europe Indicators for European Regions

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Regional Identity in the Information Society

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Preface

This report is a deliverable of BISER (Benchmarking the Information Society: eEurope Indicators for European regions), a research project funded by the European Commission under the "Information Society Technology" Programme (1998-2002). The overall goal of BISER is to define, develop and pilot a set of indicators for benchmarking the progress of European regions in respect of the eEurope initiative and the Information Society in general.

Within the BISER project, two surveys – a General Population Survey (GPS) and a Decision Makers Survey (DMS) – were conducted in early 2003 covering ten domains: [1] Government and Public Administration, [2] Transport and the Environment, [3] Healthcare, [4] Regional Identity, [5] Business Enterprise, [6] Innovation and R&D, [7] Work and Labour Market, [8] Education, Training and Skills, [9] Social Inclusion and Cohesion, and [10] ICT Infrastructure.

This report describes the domain of Regional Identity. The objectives are to report, in a succinct format, on the results of indicator testing and data gathering, and to offer a basis for benchmarking the domain. This report has been peer-reviewed internally and by an external expert.

The target audiences for the report include (in addition to general 'Information Society watchers') in particular those involved in regional and EU benchmarking, interested parties in respective research and application, and national and regional statistical offices.

The BISER consortium is led by Empirica (Bonn, Germany), and includes the following project partners: Danish Technological Institute (Taastrup, Denmark), Local Futures Group (United Kingdom), Salzburg Research (Austria), University of Rome (Italy), and Work Research Centre Ltd. (Dublin, Ireland).

Danish Technological Institute is an independent, non-profit institution approved as technological service agency by the Danish Ministry of Business and Industry (DK).

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0 Executive summary

This report is one of a number that were generated by the BISER project, in accordance with the adopted 'domain-based' structure. It builds on the findings of a Regional Population Survey (RPS), undertaken between January and March 2003, targeted at a representative sample of more than 11,300 citizens (i.e. about 400 respondents in each of the 28 BISER regions).

During the research and consultation undertaken by BISER, the notion of territorial or regional identity -- how the geographical focus or expression of a locality or region is perceived, understood and perhaps acted upon by residents as well as outsiders -- has surfaced on many occasions.

Regional identity has been stressed as an important factor in regional development particularly by practitioners, but is also a clear and recurring theme in both research and policy. It has not, however, been the subject of detailed definition or analysis but often instead simply appealed to in terms of an accepted universal good, the benefits of which, like motherhood or apple pie, are surely obvious to all. It is often supposed that regions provide a sense of identity, of place and of belonging necessary for social and regional sustainability. Regions are certainly often the formal focus for governance, policy and action.

Unlike other BISER domains, however, regional identity in an Information Society context, is virtually virgin territory. This is especially the case when it comes to defining and communicating an operational understanding, and then in measuring it. Regional identity is at best a slippery and fuzzy concept with few, if any, existing studies, surveys or data sources to build upon. As a BISER domain it is thus challenging and risky. The data, results and analysis presented here must therefore be considered as a first attempt to understand and quantify this important area, providing a substantial basis for future research, as well as useful inputs to the policy and regional development processes more generally.

There are two headline results of the analysis in this report:

- A high level of regional identity, as defined by the BISER research (see section 2.2), is strongly correlated with comparatively weak and more peripheral regions with high relative levels of primary employment. Respondents in such areas tend to be older, have lower levels of education, fewer skills, use ICT less, and also show a strong desire not to move out of their region compared to respondents elsewhere. Traditional media are used to maintain and promote regional identity and development in such areas, particularly regional newspapers and regional radio. TV usually has opposite correlations than reading a regional newspaper or listening to regional radio. Perhaps the use of TV is more likely to be dominated by national and international programming than either newspapers or radio, and that the latter two lend themselves more readily to a regional focus.
- In regions where respondents do demonstrate strong regional identity, ICT can be used to further support and promote it, and this seems to have beneficial social if not economic effects. In more prosperous core regions, with greater levels of tertiary and high tech employment and generally younger, more mobile, qualified and skilled inhabitants, regional identity is a much less important factor. These regions use ICT much more than their weaker counterparts but the specific role of regional ICT and ICT's support for regional identity is also much less.

Another clear conclusion from the regional identity domain is that the regional variable, even at the NUTS II level being used by BISER, is important and explains much more of the variation seen in the data than if the analysis is conducted at respondent level only. Further, within each of the five countries in the BISER survey with more than one region (France, Germany, Italy, Spain and UK) there is no clustering of regions, which shows that the country level, like the respondent level, does not explain much of the variation in the data. Overall, therefore, this is a strong indication that the socio-economic characteristics of the region within which the respondent lives are much more important in explaining the variation of the

data than the socio-economic characteristics of either the respondent themselves as an individual or the country within which s/he lives.

The results presented in this report show that European regional policy, with its often specific and conscious focus on regional identity in rural, more peripheral and economically weaker areas (e.g. in the Leader programme and in the ERDF Innovative Actions aimed at Objective 1 and 2 regions), is perhaps justified. Emphasising regional identity in such regions can thus be seen as an eminently practical and sensible dimension to a regional development strategy. One can conclude that regional decision-makers in rural and more peripheral areas are attempting to apply leverage to something that does have conscious meaning and value for inhabitants. Their efforts are thus probably not entirely in vain.

This report has also shown that in such relatively disadvantaged regions, ICT can be used to support regional identity and thereby social, and also perhaps, economic development. There needs to be a conscious focus on regional ICT resources, for example in relation to community development, on the one hand, and regional trading networks on the other. Leakages out of the regional system are, however, inevitable, especially in the latter case as ICT invariably also encourages trans-regional, national and even global networking. This, perhaps, is the main policy dilemma arising from the impact of ICT on regional identity. For example, where a strong and positive regional identity is instrumental in attracting population, workers, students and new growth, this is likely in turn to undermine existing identity because of the looser attachments newcomers have to the region and the wider attachments existing residents will develop. (OECD, 2001).

Overall, the BISER research has been able to give some sensible and practical answers to the question 'what is meant by regional identity?' BISER has also been able to unravel and explain some of the impacts of ICT on regional identity in an information society / knowledge economy context. It has not been possible to analyse the relationship between local/regional identity to national identity and other types of identity, and whether or not it is in conflict with globalisation. Some hints have been given, however, for example that it may be difficult, at one level, to reconcile the forces of globalisation and regional identity using ICT, although at another level and in the right context and by applying the right policies, ICT can enhance regional identity and social, if not economic, development. This is one area for further research. Indeed, the concept of regional identity and the impact on it of ICT, itself requires more research which can build upon the tentative conclusions presented here.

In conclusion, regional identity and the impact upon it of ICT, certainly as measured by the BISER survey, is a powerful concept which successfully discriminates between NUTS II regions and provides substantial explanatory power, both about regional variation but also in terms of regional development processes.

1 Introduction and domain overview

1.1 Introduction

This report is one of a number that were generated by the BISER project, in accordance with the adopted 'domain-based' structure. It builds on the findings of a Regional Population Survey (RPS), undertaken between January and March 2003, targeted at a representative sample of more than 11,300 citizens (i.e. about 400 respondents in each of the 28 BISER regions). The BISER Regional Decision Maker Survey (RDMS), targeted at a representative sample of more than 8,500 executives in different establishments, was not used for the regional identity survey because of lack of space in the RDMS questionnaire. Please see the methodology chapter 6 for details.

Additional sources of data utilised in this report include data contained in the REGIO database of Eurostat, as well as data produced from a special analysis of the Labour Force Survey (LFS) by Eurostat and the authors.

In terms of the structure, the report comprises four main sections:

- Section 1: Introduction – this section, including an overview of the domain and its scope, and an analysis of the main research and data sources of relevance.
- Section 2: Summary of indicators used for the domain analysis – this section summaries the domain indicators, the reasons they were chosen and provides definitions of basic concepts.
- Section 3: Analysis and discussion of the results – this section systematically presents and analyses the main results of the survey, provides tentative explanations of the observations made, and provides tentative policy recommendations.
- Section 4: Conclusions – this section concludes the domain analysis and summarises the overall results.

In addition to these four main sectors, there is a bibliography, a section of the BISER survey methodology, and an annex.

1.2 Domain overview and scope

1.2.1 The concept of regional identity

During the research and consultation undertaken by BISER, the notion of territorial or regional identity -- how the geographical focus or expression of a locality or region is perceived, understood and perhaps acted upon by residents as well as outsiders -- has surfaced on many occasions.

In this context, the research undertaken by BISER has attempted to find some answers to a number of questions, for example:

- what is meant by regional identity?
- is local/regional identity in conflict with, or supportive of, national identity or other types of identity?
- is regional identity in conflict with globalisation?
- how much does regional identity depend upon factors like history, culture, language, shared memory, etc.
- what is the role of regional identity in an information society / knowledge economy context where, it is often postulated, globalisation, de-localisation and individualisation are taking

place and the individual's private, public and working lives are becoming increasingly virtual and independent of their physical living space?

- what is the effect of ICT on regional identity?

Regional identity has been stressed as an important factor in regional development particularly by practitioners, but is also a clear and recurring theme in both research and policy. It has not, however, been the subject of detailed definition or analysis but often instead simply appealed to in terms of an accepted universal good, the benefits of which, like motherhood or apple pie, are surely obvious to all. It is often supposed that regions provide a sense of identity, of place and of belonging necessary for social and regional sustainability. Regions are certainly often the formal focus for governance, policy and action.

Unlike other BISER domains, however, regional identity in an Information Society context, is virtually virgin territory. This is especially the case when it comes to defining and communicating an operational understanding, and then in measuring it. Regional identity is at best a slippery and fuzzy concept with few, if any, existing studies, surveys or data sources to build upon. As a BISER domain it is thus challenging and risky. We include it for three main reasons:

- many of the regional development actors we have consulted tell us that it is an essential ingredient of any attempts to understand and measure regional development in the Information Society
- it is intellectually challenging and an opportunity to make a distinctive and perhaps significant research contribution which could also have practical application by, for example, developing meaningful and operational indicators
- it is almost unique of the BISER domains in distinguishing a specifically regional approach from one based on national or sectoral data.

The regional identity domain attempts to examine the territorial identity of the region, i.e. as held by regional inhabitants (whether as individuals, households or organisations) as well as in relation to the external world. Regional identity is based on a changeable amalgam of individual and group adherence to, recognition of, and empathy (or occasionally disdain) for a tract of territory. This is not necessarily strictly spatially defined as it may owe more to somewhat fuzzy and sometimes inaccurate cultural, linguistic and historical underpinnings, but it normally has a strong geographic expression through a sense of place and belonging. Forms of governance, participation and democracy can also be important in shaping regional identity, but these aspects are examined in the government/public administration domain.

Similar notions can be held by non-regional inhabitants, but these are more often shaped by regional image-building, and even regional branding in a commercial and marketing context, in relation to other regions. The latter is covered by the business enterprise domain.

Apart from feelings of identity expressed through attitudes and notions of belonging, regional identity can also be related to the behaviour of inhabitants in terms of their membership of specifically regional associations and networks. This aspect can also be linked to the existence of and adherence to civic and professional norms and the development of regional social and organisational capital in the broader sense. It can also provide the foundation for creating place identity and a sense of community often arising out of high levels of community spirit and trust. Theoretical research, indeed, often draws a link between the level of trust in a community as a condition of for both democracy and regional identity, and as a necessary condition for economic competitiveness and prosperity.

Regional and community networks and civic norms include social relations, formal and informal social networks, group membership, trust, reciprocity and civic engagement. These attributes are generally considered to be the property of the group not the individual. Adherence to such local and community groups is not always, however, seen as beneficial, especially in economic terms, if for example economic relations are developed exclusively within the local group at the expense of potentially more productive relations with members outside the group. Measuring social capital can include the development of indices including measures of community organisational life, measures of engagements in public affairs, measures of community volunteerism, measures of informal sociability and measures of trust.

Finally, we can conceive of regional identity through the existence and use of regionally-focused media, such as newspapers and TV and radio stations. Such media both create and give expression to regional identity and, in the present context, are prime candidates for exploiting ICT in order to reinforce their role. Regional media, however, face stiff competition from global mass media on the one hand, and from "me" media (i.e. electronic individualisation of media content and use) on the other, so that their level of success or decline may be one indication of the increasing or decreasing strength of regional identity in a world which is simultaneously globalising and individualising.

The conscious promotion of regional or territorial identity amongst decision and policy makers seems to be increasing, perhaps because the economic imperative in the Information Society, spurred on by the delocalising potential of ICT, seeks out ever more specific locational characteristics, and regions need to position or brand themselves in order to achieve recognition and economic success. Regional awareness amongst citizens and workers, however, is more problematic, and probably depends upon the particular cultural milieu within which it is embedded. The perception of regional identity by both sets of actors is also beset by globalisation and the global media, especially in awakening the individual's awareness of the wider world. Maybe, it is precisely because individual horizons have been so dramatically extended that some people seek a counterbalance in the local and regional. Both of these drivers produce greater recognition of the need for an integrated and synergetic approach to regional development whether at the regional level itself or through national structures.

At the regional level, the need to promote regional territorial identity is sometimes seen as just as great as the need to promote economic growth, social inclusion and environmental sustainability. In fact, regional identity and regional social capital are often perceived as necessary (if not sufficient) conditions for, and as precursors to, successful socio-economic and environmental regional development. BISER's discussions with regional development agencies and local governments responsible for regional development, through their European networks such as Eris@ and Elanet[1], show that these organisations are acutely aware of the role of regional identity in helping to shape and boost their regional development strategies and the success they are likely to have. Regional identity in the Information Society is now firmly on the agenda of both European and national policy makers, and of the regional practitioners themselves, especially those that represent Europe's weaker, less developed regions.

Regional differences remain the prime sources of competitive advantage. But a region also provides a sense of place and belonging, as well as a focus for governance, policy and action. which is necessary for social and economic stability in such a globalised world. Without the local (regional) the individual's world is hostile and appears to be full of risks. (Jensen-Butler, 2000). Will Hutton in his latest book (2002) also suggests that the regional realm, particularly when expressed through community and public goods (social capital), provides an essential anchor in the lives of individuals and makes up the sinews of a prosperous and equitable society and economy. These observations mirror the fundamental contribution of regions in the Information Society as the twin anchors of continuity and diversity, both of which are necessary for innovation, prosperity and an improving quality of life. Indeed, regional identity, and the territorial expression of this through the integration of economic, political, environmental, social and cultural assets and characteristics, lies at the heart of the new regional thinking and agenda in the Information Society.

Regional identity is the image, visibility and presence perceived, seen and felt by regional inhabitants and by the outside world. It is nurtured by the development of social capital which strengthens regional community, institutions and processes, and which itself is an important ingredient in regional economic development and social cohesion. As such, regional identity is strongly dependent upon shared information, knowledge, communication and interaction, all of which are greatly enhanced by ICT, particularly when ICT acts to support rather than replace traditional forms of communication and interaction.

[1] ELANET (The Local Authorities Telematic Network Initiative), an Executive Committee of CEMR: Contact: President Javier Ossandon (http://www.elanet.org) and ERIS@ (European Regional Information Society Association). European Regional Information Society Association. Contact: Gareth Hughes (http://www.erisa.be)

The roles which the broadcast and electronic media can and do play in influencing a region's image, identity and development are becoming more important and raise many interesting questions for the future. Europe's traditional boundaries are becoming blurred in many ways and the changing scope of the media is fundamental here. Cheaper, simpler communications technology means special interest groups can easily set up their own web channels or produce programming. At the same time, satellite transmissions mean messages can be beamed into a region from well beyond the old centres of influence. How is regional identity created and conveyed? How does media coverage of Europe's different regions influence people inside and outside of these areas? And what will be the impact of ICT and digital developments in giving Europe's regions a 'voice'.

ICT's role in promoting regional identity can thus be seen through information, publicity, networks, fora, awareness raising, pressure groups, new types of organisations, regional media, new types of inter-regional cooperation, etc.

1.2.2 Research and policy

Recent research by EITO (EITO 2002, p. 271) into the building of local communities concludes that the widespread adoption of ICT into society may make it possible to rebuild strong local communities, where these have been eroded. E-commerce and telework may both reduce car travel and provide an incentive for people to spend more time with their families and in their local geographical community. The incentive will be enhanced if local amenities such as post offices or corner shops act as e-commerce delivery points. Local businesses would also benefit. Research shows that interaction over the Internet actually encourages interaction off-line. If web traffic can be directed into localities, this could encourage local face-to-face interaction and revitalise communities.

Further and at a somewhat larger scale of organisation, Castells shows in his seminal work on 'the power of identity in the Information Age', that cities and regions across Europe have gathered together in institutional networks that bypass national states, and constitute one of the most formidable lobbies, acting simultaneously on European institutions and on their respective national governments. In addition, cities and regions actively engage in direct negotiations with multinational corporations, and have become the most important agents of economic development policies, since national governments are limited in their actions by EU regulations. (Castells, 1997, p. 272).

Regional identity is also becoming increasingly manifest at EU policy level. The European Commission has recently adopted the guidelines for the innovative actions of the ERDF (Article 4). A budget in the order of EUR 400 million (0.4% of the ERDF budget) is being made available to the most disadvantaged regions (Objectives 1 or 2) during the 2000-06 programming period to help them reduce their "innovation deficit". The priority themes are (European Commission, 2000a, 2000b):

- the regional economy based on knowledge and technological innovation
- e-EuropeRegio -- the Information Society at the service of regional development
- regional identity and sustainable development.

Here, the promotion of regional identity is now strongly supported as one component within a wider regional development and Information Society approach. This reflects a longer tradition of incorporating a focus on regional identity as part of local development initiatives, particularly in less developed areas. These also incorporate social capital approaches, such as in the EU LEADER programme for rural development. Reviewing the experience of LEADER in the UK, Shucksmith (2000) notes that discourses on endogenous development tend to emphasise building the capacity not of individuals but of 'communities as territories', to overcome instances of market failure or to counter broader forces of economic restructuring. Capacity-building is a process of improving interpersonal and conceptual skills, creating new forms of organisation (partnerships between statutory and non-statutory agencies), and promoting new types of linkage between citizen groups and public agencies.

The OECD has also started to incorporate an examination of regional identity into its policy analyses and recommendations. For example, the recent major report on "Cities and Regions in the New Learning Economy" (OECD, 2001) included five case studies of regions and cities which show how social capital and regional identity, in terms of social networks and social conventions and norms, are important components of individual and organisational learning, which, in turn, feed into successful regional economic development.

For example, the Øresund bridge, opened in 2000 linking Copenhagen in Denmark with Malmö in Sweden, is expected to contribute to the formation of a new cross border region, and efforts are being made to develop a new regional identity strongly supported by ICT and the knowledge economy to this end. In Viennes in France, regional identity and economic development has been strengthened by a learning region approach using ICT. Other case studies show similar issues and developments, as in Kent in the UK, Andalucia in Spain and Jena in Germany. According to this report "... a policy of change by bringing in new people must be reconciled with the need for a distinctive regional identity..." (OECD, 2001: 109). In other words, a positive regional identity (both internal and external) can be used to attract workers, students and new growth, but this in turn can undermine existing identity because of the looser attachments newcomers have to the region, so on-going efforts are needed to constantly adapt the identity and configuration of regional assets to changing circumstances.

National policies in Europe are also increasingly focusing on regional identity within an Information Society and regional development paradigm. For example in Italy where the 2001 E-Italy Paper stresses the need to foster regional identity when considering how to develop e-government and the local level (www.mininnovazione.it/fsi), and in Greece where the Options Paper for the Information Society in Attica has an objective to reinforce sovereignty and regional identity (http://www.daem.gr/Athina/en/enIndex.html).

Most recently, the European Commission FOREN Project and a specially appointed Expert Group have incorporated regional identity concepts into the development of regional foresight frameworks and tools (European Commission, 2002). Here, regional identity is seen more as a process of self(regional)-reflection (p. 19) and as a means of self-efficacy "…to become aware of one's own capabilities as well as one's limitations…" (p. 23), especially in the context of grass roots social processes in which all relevant actors are involved in decentralised activities to develop regional foresight. Taking this logic one step further, regional identity could be seen as part of the regional governance system in terms of regional development plans, statistics and implementation processes. However, this in itself does not imply that it is anyone other than the regional governing class who hold such regional identity awareness, hence the requirement for a complementary grass roots and bottom up approach.

This regional foresight report also contains a laudable but normative statement that "The European Union needs diversity in political initiatives and a variety of organisational structures. Diversity is the strength of Europe, not its weakness or problem. Building unity and synthesis out of the diversity will be the challenge of European policy making for the future." (p. 24).

1.2.3 Existing data on regional identity

There are few, if any, existing statistics to measure regional identity in general terms or in an Information Society / Knowledge Economy context which are available in any consistent or widespread manner, either at national or regional levels in Europe. As explained above, a concise and accepted notion of regional identity is largely missing from the literature, so its inclusion in BISER needs to start largely from scratch.

There are one off examples in specific regions, normally undertaken through desk research and/or sample surveys, but these tend to be quite specific to the particular region in question and do not offer the chance of any widespread replication across Europe.

However, some countries do provide some interesting data which is consistent across regions. For example, Statistics Austria, in relation to culture and sport, provide some data on:

- capacities, performances and attendance at the Austrian Länder and municipal theatres

- capacity, performances and attendance at selected festival places
- number of cinemas, seating capacity and attendance
- number of visitors to museums, exhibitions, showrooms and other sights
- registered associations by category

Similar data from some other countries is also available, but generally on an ad hoc and incomplete basis and without significant overlap between regions in different countries.

However, no previous systematic research has been found directly relating regional identity to the use of ICT, or to the Information Society more generally, whether at regional, national or European levels. The data, results and analysis presented here must therefore be considered as a first attempt to understand and quantify this important area, providing a substantial basis for future research, as well as useful inputs to the policy and regional development processes more generally.

2 Summary of indicators used for the domain analysis

2.1 Overview of regional identity indicators

The following indicators were used from the BISER Regional Population Survey (RPS) targeted at the representative sample of (i.e. about 400 respondents per region) in two sets of analyses:

1. at respondent level, i.e. more than 11,300 citizens across the 28 regions – this analysis provides the input to subsections in section 3 entitled "general situation".
2. at regional level, i.e. using the mean values of each of the 28 regions – this analysis provides the input to subsections in section 3 entitled "regional variation".

Table 2-1: Overview of regional identity indicators

Area	Sub areas	Indicators and definitions	Base
1. Unravelling regional identity (BISER intermediate indicators)	1.1 Sense of regional identity	Percentage of respondents who state the following sense of identity with the region they live in: 1. strong 2. moderate 3. weak 4. none	All respondents, excluding 'do not know'
	1.2 Use of traditional regional media	Percentage of respondents who have in the last four weeks: 1. read a regional or local newspaper 2. listened to a regional or local radio station 3. watched a regional or local TV station's programme	All respondents
	1.3 Residential preference	Percentage of respondents who: 1. would prefer to stay in the region 2. would prefer to move out of the region but stay in country 3. would prefer to move abroad 4. do not care where they live.	All respondents
2. Regional identity and ICT (BISER 'e' indicators)	2.1 Use of the Internet for regional purposes	Percentage of Internet users who have: 1. got news about region from the Internet 2. checked for opening times, addresses or other practical information about the region 3. visited the website of a regional organisation dealing with hobbies, sports, or recreation 4. visited the website of a regional neighbourhood, charity, welfare or voluntary organisation 5. visited the website of a regional political party, trade union, residents group or other civic or political organisation 6. visited the website of the governing mayor or head of local government within the region	Respondents who have used the Internet within the last 12 months
	2.2 Effect of Internet and email on regional identity	Percentage of recent internet users who state effect of internet and e-mail is: 1. a greater sense of identity with the region 2. less sense of identity with the region 3. a different sense of identity with the region 4. no effect on sense of identity with the region	Respondents who have used the Internet within the last 4 weeks
	2.3 Location of email partners	Average percentage of e-mail partners located: 1. in region 2. in country but outside region 3. outside country	Respondents who used e-mail last week

2.2 Reasons for selecting the domain indicators

Each of the regional identity indicators has been selected to satisfy:

- the conceptual requirements of the regional identity domain
- the practical requirements of a relatively short telephone interview with respondents in the context of questions from nine other domains
- the operational requirements of data analysis in order to produce useful results capable of further replication.

From the overview of regional identity domain indicators (presented in section 2.1 above), it can be seen that two different types of indicators have been selected in order to explore different aspects of regional identity, whilst fulfilling the operational requirements of the survey:

- attitudenal indicators – i.e. attempting to elicit the respondent's attitude or opinion about something, normally implying that a value judgement has been exercised by the respondent. Attitudenal indicators can also elicit the respondent's preference for different future or hypothetical courses of action or behaviour
- behavioural indicators – i.e. attempting to elicit the respondent's actual behaviour or activity undertaken in the present or the recent past; in this case the respondent is asked to recall actual events rather than give opinions or preferences.

	attitudenal indicators	**behavioural indicators**
1.1 Sense of regional identity	⨯	
1.2 Use of traditional regional media		⨯
1.3 Residential preference	⨯	
2.1 Use of the Internet for regional purposes		⨯
2.2 Effect of Internet and email on regional identity	⨯	
2.3 Location of email partners		⨯

It can be seen that there is an overall balance between the attitudenal and the behavioural indicators. The analysis and interpretation of the results must clearly take account of these different types of indicator.

2.3 Operational definitions

Respondents to the BISER telephone questionnaire were introduced to the notion of regional identity by explaining that they would be asked questions about their attachment to the region they live in, their use of regional media and how the use of the Internet and email may affect this. It was explained that by regional identity was meant feelings of belonging and attachment, an awareness of what is happening in the region, and whether or not they wished to move out of the region.

3 Analysis and discussion of the results

3.1 Unravelling regional identity

Given the general lack of previous work measuring regional identity of any kind, this section focuses on operationalised notions of regional identity. This is necessary in order to establish a context within which to measure the impact of ICT in section 3.2.

3.1.1 General situation

Table 3-1 below is a matrix showing coefficients of determination between selected regional identity indicators and other selected indicators at respondent level. Although those shown are all significant, none demonstrate high association between variables. The greatest level of association is just over 5% but most are under 1%. Although many of the coefficients do not lend themselves to any sensible interpretation, some weak patterns can be discerned.

Age does seem to be weakly correlated with strong rather than weak regional identity and with a desire to remain in the region rather than leave it. This is, perhaps, what one would expect, as the elderly are more likely to feel closely attached to where they live and to have a stronger desire to stay put compared to the young.

The reverse correlations are the case for age when education was completed, and can be explained by the likelihood that those with a higher education are more prone to be mobile in terms of residence and have a weaker attachment to where they live.

Females seem to be marginally more likely to have a strong sense of regional identity and to stay where they are than males, but again the strengths of association are low.

Skills possessed by individual respondents do not seem to present any clear patterns. However, the use of different forms of ICT does generally correlate with weak regional identity and a greater desire to move out of the region, which supports the above conclusion concerning age when education completed.

It is difficult to discern any patterns in the correlations involving the use of traditional regional media, except that the use of regional TV usually has opposite correlations than reading a regional newspaper or listening to regional radio. Perhaps the use of TV is more likely to be dominated by national and international programming than either newspapers or radio, and that the latter two lend themselves more readily to a regional focus.

Table 3-1: Unravelling regional identity – respondent level

Coefficients of determination (r^2) Part 1	**Indicator Sub Area 1.1 Sense of regional identity**		**Indicator Sub Area 1.2 Use of traditional regional media**			**Indicator Sub Area 1.3 Residential preference**			
	Strong sense of regional identity	Weak sense of regional identity	Read regional/ local news-paper in last 4 weeks	Heard regional/ local radio in last 4 weeks	Seen regional/ local TV in last 4 weeks	Prefers to stay in region	Prefers to move from region but stay in country	Prefers to move abroad	
Age	+0.012	– 0.005	+ 0.001	+ 0.004	– 0.002	+ 0.052	– 0.010	– 0.016	Age
Gender (1=male, 2=female)	– 0.001		+ 0.001	+ 0.004		+ 0.002		– 0.001	Gender (1=male, 2=female)
Age when education completed	– 0.007	+ 0.004			+ 0.005	– 0.020	+ 0.002	+ 0.005	Age when education completed
Settlement size		+ 0.001		– 0.001	+ 0.002	+ 0.002	– 0.002	– 0.001	Settlement size
Has none of mentioned skills			+ 0.025	+ 0.010		+ 0.020	– 0.003	– 0.008	Has none of mentioned skills
Has 3 skills listed	+ 0.001		– 0.006	– 0.004		– 0.005		+ 0.003	Has 3 skills listed
Has all 5 skills listed					+ 0.001	– 0.006	+ 0.001	+ 0.001	Has all 5 skills listed
States any PC skills needed in workplace	+ 0.005		– 0.008	– 0.001		– 0.001			States any PC skills needed in workplace
Has used an office programme						+ 0.003		– 0.001	Has used an office programme
Has used PC in last 4 weeks			+ 0.027	+ 0.010		+ 0.019	– 0.003	– 0.007	Has used PC in last 4 weeks
Has ever had Internet access at home		+ 0.001	– 0.016	– 0.007		– 0.016	+ 0.002	+ 0.008	Has ever had Internet access at home
Has used Internet in the last 12 months		+ 0.002	– 0.025	– 0.013		– 0.028	+ 0.003	+ 0.010	Has used Internet in the last 12 months
Regularly uses Internet min 1 hour a week			– 0.011	– 0.004	+ 0.001	– 0.016	+ 0.002	+ 0.005	Regularly uses Internet min 1 hour a week
Has sent min 1 e-mail last week		+ 0.001	– 0.010	– 0.004	+ 0.002	– 0.017	+ 0.002	+ 0.006	Has sent min 1 e-mail last week

Coefficients of determination (r^2) Part 2	**Indicator Sub Area 1.1 Sense of regional identity**		**Indicator Sub Area 1.2 Use of traditional regional media**			**Indicator Sub Area 1.3 Residential preference**			
	Strong sense of regional identity	Weak sense of regional identity	Read regional/ local news-paper in last 4 weeks	Heard regional/ local radio in last 4 weeks	Seen regional/ local TV in last 4 weeks	Prefers to stay in region	Prefers to move from region but stay in country	Prefers to move abroad	
N	11073	11073	11200	11200	11200	11071	11071	11071	N
Minimum	0	0	1	1	1	0	0	0	Minimum
Maximum	1	1	3	3	3	1	1	1	Maximum
Mean	0.43	0.10	1.18	1.28	1.26	0.73	0.11	0.08	Mean
Standard Deviation	0.50	0.30	0.38	0.45	0.45	0.45	0.32	0.27	Standard Deviation
Coeff of variation	116.28	300.00	32.20	35.16	35.71	61.64	290.91	337.50	Coeff of variation

Notes:
1) The positive (+) or negative (–) signs before each r^2 value indicate only the direction of the underlying relationship revealed in order to ease interpretation. All r^2 are themselves, of course, mathematically positive (+).
2) All blank cells are non-significant correlations at 90% or 95% level.
3) Using the 'residential preference' and 'sense of regional identity' variables in a raw form – that is not divided into answer categories – does not add anything to the overall analysis; the correlations are still small and supports the 'findings' reported above.

Table 3-2 shows the results of splitting responses to the regional identity indicator into, on the one hand, a southern and northern European group, and, on the other, three groups representing core, intermediate and peripheral regions, and then testing whether or not there is a significant difference between the means of the different groups.

Table 3-2: Location of respondent – respondent level

eta coefficients	**Northern/southern Europe (1=north; 2=south)**	**Core-periphery (1=core; 2=intermediate; 3=periphery)**
Strong sense of regional identity	+ 0.000	+ 0.027
Weak sense of regional identity	– 0.004	– 0.006

Notes:
1) N=28.
2) The positive (+) or negative (–) signs before each eta coefficient indicate only the direction of the underlying relationship revealed in order to ease interpretation. All eta coefficients are themselves, of course, mathematically positive (+).
3) See Annex 1 for designation of north-south Europe and core-intermediate-periphery
4) All cells with data are significant at 90% or 95% level.

Although the values are again very low, which means that on their own they cannot be used to draw any conclusions, all eta coefficients are significant and do tell a consistent story, i.e. it seems more likely for southern European and peripherally located respondents to have a strong sense of regional identity. As would be expected, the situation is reversed for a weak sense of regional identity. The core-periphery designation provides slightly higher coefficients than the northern-southern Europe location. The settlement size indicator shown in Table 3-1 also generally supports the above conclusions. Overall, this tends to provide some consistent evidence, however weak, that respondents in the less economically developed locations tend to have a marginally stronger sense of regional identity.

Overall, therefore, we have a picture which shows that the older respondents who use ICT less and who live in more peripheral locations are more likely to have a stronger sense of regional identity. It must be underlined again, however, that the levels of association are very low, never more than a few percentage points, but that this generalised conclusion can be drawn because a large number of different indicators support it with few, if any, deviations.

3.1.2 Regional variation

Table 3-3 below is a matrix showing coefficients of determination between selected regional identity indicators and other selected indicators at regional level. All those shown are significant and most show relatively high levels of association between variables. The greatest level of association is over 60% and many are well over 20%. In addition to this, many consistent patterns in the data are found, and most of these support the conclusions found in section 3.1.1 but with much stronger evidence.

The sense of regional identity indicator is positively associated with the regional level of employment in the primary sector (agriculture, forestry and fisheries), as depicted in Figure 3-1, and negatively associated both with employment in the tertiary (services) sector generally, and with the high tech sector in particular. As would be expected, the reverse is the case with weak sense of regional identity. Many other indicators strongly support this general trend, so that a high sense of regional identity is negatively correlated with both economic and population potential, PPP (purchasing power parity per inhabitant), GDP, total population, population density and the employment rate. It is positively correlated with unemployment. Table 3-3 also shows that strong regional identity, as we would expect from the data presented so far, is positively correlated with preference to stay in the region and listening to regional radio.

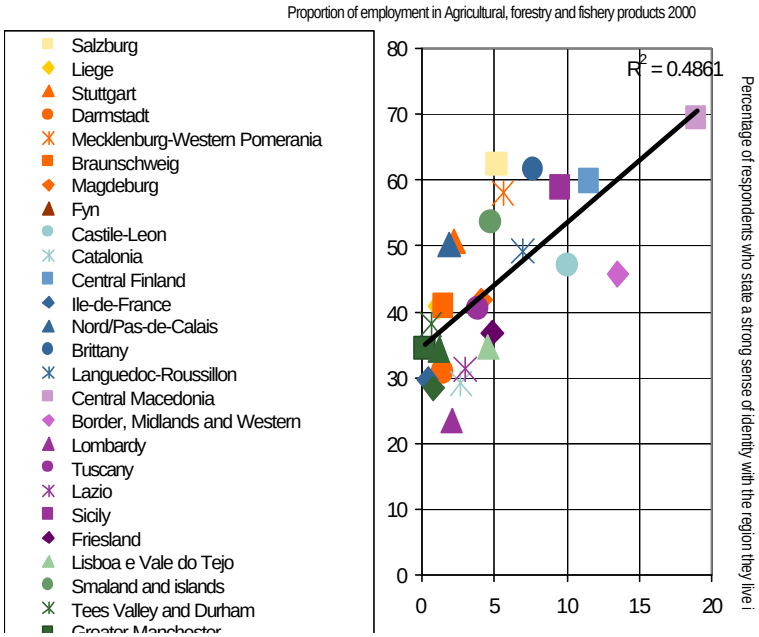
Table 3-3: Unravelling regional identity – regional level

Coefficients of determination (r^2)	Indicator Sub Area 1.1 Sense of regional identity		Indicator Sub Area 1.2 Use of traditional regional/local media			Indicator Sub Area 1.3 Residential preference			
	Strong sense of regional identity	Weak sense of regional identity	Read regional/ local news-paper in last 4 weeks	Heard regional/ local radio in last 4 weeks	Seen regional/ local TV in last 4 weeks	Prefer to stay in region	Prefer to move from region but stay in country	Prefer to move abroad	
Primary sector	+ 0.472 + 0.486#	– 0.377 – 0.451#				+ 0.262	0.090**	– 0.216	Primary sector
Secondary sector									Secondary sector
Tertiary sector	– 0.151	+ 0.342		– 0.147		– 0.259	0.181	+ 0.200	Tertiary sector
High Tech sector	– 0.196 – 0.447***	+ 0.207 + 0.390***				– 0.131 – 0.351***	0.008** 0.085***/**	+ 0.087 + 0.182***	High Tech sector
GDP potential index using car driving as distance between regional nodes	– 0.1227	+ 0.175							GDP potential index using car driving as distance between regional nodes
Population potential index -- car driving as distance between regional nodes	– 0.136	+ 0.158							Population potential index -- car driving as distance between regional nodes
Settlement size <1.000 pop			+ 0.175	+ 0.275					Settlement size: <1.000 pop
Settlement size >100.000 p			– 0.276	– 0.134					Settlement size: >1.000.000 p
PPP	– 0.302	+ 0.287				– 0.162	0.093**	+ 0.026	PPP
GDP	– 0.279	+ 0.251	– 0.131	– 0.252		– 0.222	+ 0.468		GDP
Total pop	– 0.222	+ 0.177	– 0.166	– 0.273		– 0.161	+ 0.432		Total pop
Pop Density	– 0.148 – 0.309^ – 0.371^^	+ 0.183 + 0.431^ + 0.675^^	– 0.014** – 0.170^	– 0.036** – 0.282^		– 0.342 – 0.604^	+ 0.100** + 0.536^	+0.389	Pop Density
Employment rate	– 0.112*	+ 0.173							Employment rate
Unemployment rate	+ 0.152	– 0.122*							Unemployment rate
Heard regional radio in last 4 weeks	+ 0.149								Heard regional radio in last 4 weeks
Prefer stay in region	+ 0.283								Prefer stay in region
Minimum	23.40	1.30	58.10	38.30	18.90	49.10	3.50	0.90	Minimum
Maximum	69.50	22.00	97.40	92.10	89.90	86.50	37.40	20.10	Maximum
Mean	43.15	10.16	82.61	72.66	74.31	72.64	11.29	7.75	Mean
Standard Deviation	12.58	4.90	9.81	12.72	15.17	9.48	6.92	4.40	Standard Deviation
Coefficient of variation	29.15	48.23	11.88	17.51	20.41	13.05	61.29	56.77	Coefficient of variation

Notes: 1) N is 28 except where stated; 2) The positive (+) or negative (–) signs before each r^2 value indicate only the direction of the underlying relationship revealed in order to ease interpretation. All r^2 are themselves, of course, mathematically positive (+); 3) All blank cells are non-significant correlations at 90% or 95% level.

* Significant at 90% level
** Insignificant at 95%
# Fyn excluded
*** Braunschweig, Darmstadt and Stuttgart excluded
^ Greater Manchester excluded
^^ Greater Manchester and Fyn excluded

Figure 3-1: Proportion of employment in the primary sector against strong sense of regional identity (Fyn excluded)



#NV
Base (y): All, excluding DK

All this points clearly in one direction, i.e. that regions which tend to be weaker economically with lower levels of activity and population demonstrate a much stronger sense of regional identity than stronger more populous regions. Table 3-4 below further supports this conclusion in relation to core-periphery location. It shows quite strong positive associations between a peripheral location and strong sense of regional identity, listening to regional radio and a preference to stay in the region. The effect of a northern or southern European location is much less clear, except for some evidence that southern locations are more likely to be peripheral and, inexplicably, not prone to read regional newspapers. Again, as shown in Table 3-2, the core-periphery designation provides higher levels of association than the northern-southern Europe location.

It will be noted from Table 3-3 that employment in the secondary (manufacturing) sector has no correlations of any kind. This is likely to be because this sector covers a broad range of activities found in all types of location, for example in regions of high primary employment there will be food processing and low tech manufacturing industries, whilst in the larger cities and conglomerations higher tech manufacturing will also be found, as confirmed by the separation out of the high tech sector indicator. Thus, the secondary sector indicator tends to mix a range of different types of activity and is not therefore useful in the present context.

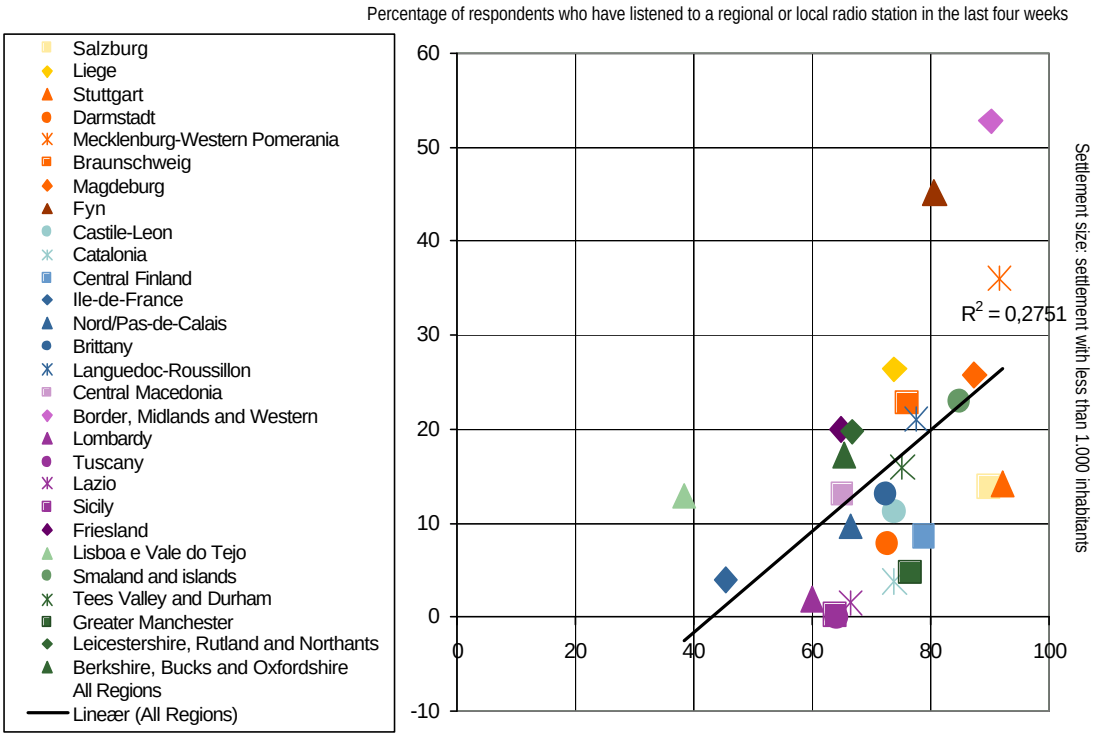
Table 3-4: Location of respondent – regional level

eta coefficients	**Northern/southern Europe (1=north; 2=south)**	**Core-periphery (1=core; 2=intermediate; 3=periphery)**
Strong sense of regional identity		+ 0.306
Weak sense of regional identity	– 0.156	
Read regional/ local news-paper in last 4 weeks	– 0.200	
Heard regional/ local radio in last 4 weeks		+ 0.294
Prefer to stay in region		+ 0.228
Prefer to move from region but stay in country		– 0.178
Prefer to move abroad		– 0.208

Notes:
1) N=28.
2) The positive (+) or negative (–) signs before each eta coefficient indicate only the direction of the underlying relationship revealed in order to ease interpretation. All eta coefficients are themselves, of course, mathematically positive (+).
3) See Annex 1 for designation of north-south Europe and core-intermediate-periphery
4) All cells with data are significant at 90% or 95% level.

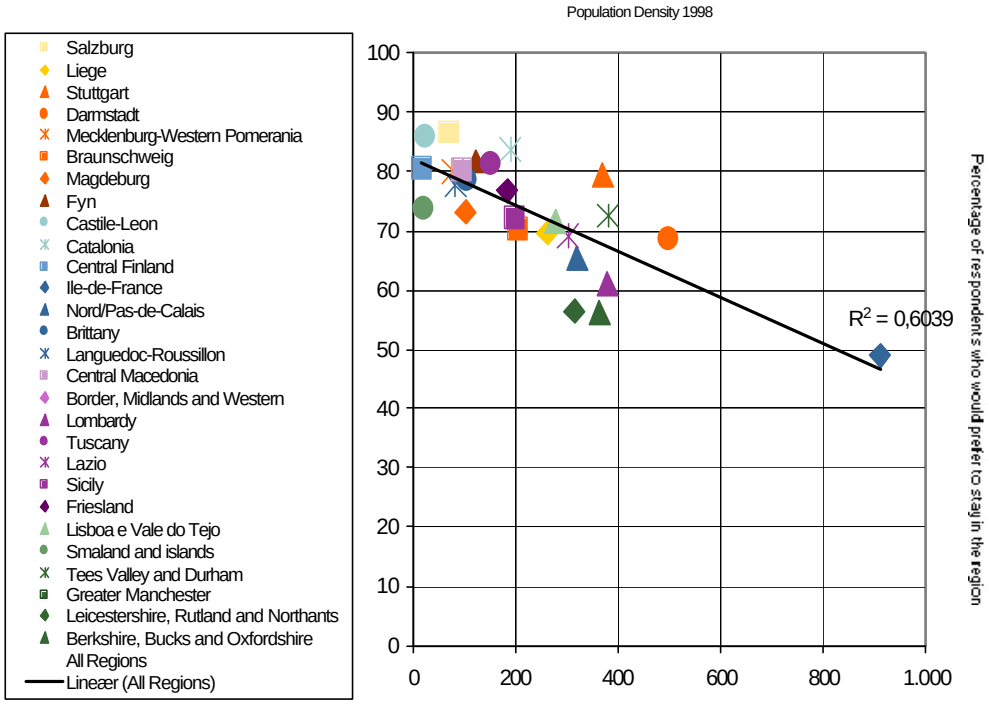
There are further interesting relationships brought out in Table 3-3. Reading regional newspapers and listening to regional radio is negatively associated with employment in the tertiary sector, GDP, population and living in a settlement of more than 100,000 inhabitants, and positively associated with living in a settlement of less than 1,000 inhabitants. Thus, these media seem to be more important in the weaker regions. (For example, see Figure 3-2). The absence of any correlations for watching regional TV again provokes the thought that this medium does not play a significant role in a regional context, unlike regional newspapers and radio.

Figure 3-2: Percentage of respondents living in a settlement of less than 1.000 inhabitants against percentage of respondents who have listened to a regional or local radio station in the last four weeks



Residential preference adds further credence to the trends already described. Respondents in the weaker more peripheral regions tend to wish to stay in the region, whereas respondents in the stronger regions, with higher levels of PPP, GDP, population and employment, tend to be more likely to wish to move out of the region and even out of the country. See, for example, Figure 3-3.

Figure 3-3: Population density against percentage of respondents who would prefer to stay in the region.

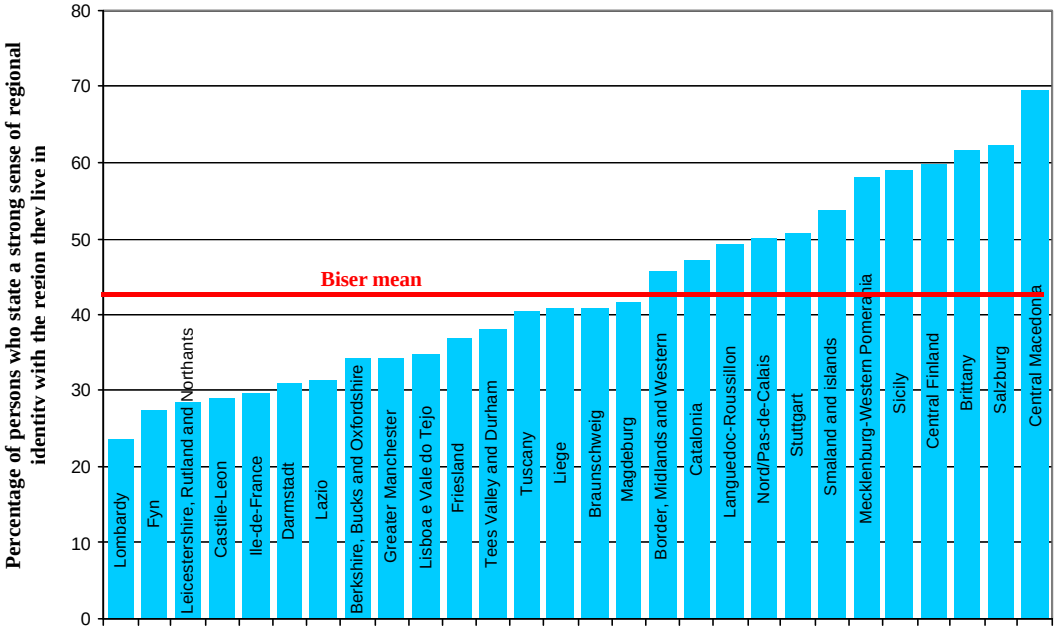


#I/T

Base (y): All Greater Manchester excluded

The coefficients of variation and the differences between minimum and maximum values from Tables 3-1 and 3-3 show that the indicators 'strong sense of regional identity' and 'weak sense of regional identity' discriminate very strongly between regions, more so than most of the other indicators. This, coupled with the fact that they often shows quite high correlations with other indicators, make them potentially very useful indicators. See, for example, Figure 3-4.

Figure 3-4: Percentage of persons who state a strong sense of regional identity with the region they live in



Base: all respondents excluding 'do not know', weighted data. Data source: BISER RPS 2003

Virtually all the data presented above brings out a very clear and highly consistent story. i.e. that regions which tend to be weaker economically with lower levels of activity and population demonstrate a much stronger sense of regional identity than economically stronger more diverse and more populous regions. It should also be noted that, although the respondent level data do support this conclusion, they do so very weakly unlike the regional level data.

The clear conclusion from this is that the regional variable, even at the NUTS II level being used by BISER, is important and explains much more of the variation seen in the data than if the analysis is conducted at respondent level only. Further, within each of the five countries in the BISER survey with more than one region (France, Germany, Italy, Spain and UK) there is no clustering of regions, which shows that the country level, like the respondent level, does not explain much of the variation in the data. Overall, therefore, this is a strong indication that the socio-economic characteristics of the region within which the respondent lives are much more important in explaining the variation of the data than the socio-economic characteristics of either the respondent themselves as an individual or the country within which s/he lives.

3.2 Regional identity and ICT

Section 3.1 attempted to unravel the general issue of regional identity without directly relating this to ICT. With this background, the focus in section 3.2 can now shift to a specific examination of the ways, if any, ICT impacts upon regional identity.

3.2.1 General situation

Table 3-5 below is a matrix showing coefficients of determination between selected regional identity and ICT indicators and other selected indicators at respondent level. Although those shown are all significant, none demonstrate high association between variables. The greatest level of association is just over 8% but most are under 2% and many below 1%. Although many of the coefficients do not lend themselves to any sensible interpretation, some weak patterns can be discerned.

Age is weakly correlated with using Internet for regional purposes as opposed to general purposes (except in the case of the mayor's web-site). Females tend also to be more likely users of regional Internet services. The opposite trend is seen for age when completed education, i.e. the more qualified the respondent is the more likely he/she is to use the Internet for non-regional purposes, again with the exception of the mayor's web-site.

All the indicators measuring use of ICT and ICT skills have a negative correlation with the use of regional as opposed to general Internet services, except the use of an office programme. Perhaps because the latter reflects simple use at any time, whereas the other indicators mainly measure intensity and level of usage.

Thus, although the evidence is quite weak, it all generally points to the fact that older, less educated respondents with fewer ICT skills tend to be relatively more likely to use regional Internet services than more general services.

In terms of respondents' views on the effect of Internet and email on their sense of regional identity, there is some weak evidence that older respondents with lower educational levels tend to think that the effect is positive. However, so do respondents with higher ICT usage and skills, so we are perhaps seeing at least two different trends here, one in relation to age and overall educational levels and one in relation to specific ICT skills and usage.

These two distinctive and separate trends are borne out by the location of email partners. Thus, as would be expected, respondents with high ICT skills and usage tend to communicate relatively more with email partners outside the region, but so do older respondents with a lower general education.

Table 3-6 directly relates indicators measuring regional identity and ICT to the general regional identity indicators at respondent level. These data show a tendency for individuals with strong regional identity, and the related desire to remain where they live, to think that the use of Internet and email will strengthen this. In a mirror of this, those with weak regional identity and a stronger desire to change their region of residence tend to think that the use of Internet and email has no effect on regional identity.

However, another pattern is perhaps also discernible here. Those respondents who think that the effect of using Internet and email will strengthen regional identity also tend to use traditional regional media less often. This different trend somewhat complicates the overall pattern but is perhaps explicable. One trend counterpoises an existing strong sense of regional identity with thinking that use of ICT will strengthen this. The other trend relates the use of traditional regional media to less readiness to accept that ICT will strengthen regional identity, perhaps because it may be difficult for those respondents who use traditional media to accept that ICT media could have the same effect, so perhaps regional Internet is filling a need for those who have a strong sense of regional identity but are less prone to use traditional regional media.

Table 3-5: Regional identity and ICT – respondent level (1)

Coefficients of determination (r^2)	Indicator Sub Area 2.1 Use of the Internet for regional purposes						Indicator Sub Area 2.2 Effect of Internet & email on regional identity			Indicator Sub Area 2.3 Location of email partners			
	Has got information about the region from the Internet	Has checked web-site for practical information	Has visited web-site of organisation dealing with hobbies	Has visited web-site of neighbourhood or welfare organisation	Has visited web-site of politi-cal org.	Has visited web-site of mayor	States Internet & email gives greater sense of regional identity	States Inter-net & email give less sense of regional identity	States Internet & email has no effect on regional identity	Email partner in region	Email partner outside region but in country	Email partner outside country	
Age		+ 0.002	+ 0.008			– 0.008	+ 0.005	– 0.004		– 0.023	+ 0.011	+ 0.007	Age
Gender (1=male, 2=female)	+ 0.005		+ 0.015		+ 0.005	+ 0.003						+ 0.002	Gender (1=male, 2=female)
Age education completed		– 0.002	– 0.004	– 0.002	– 0.002	+0.004		+ 0.002		+ 0.017	– 0.012	– 0.002	Age education completed
Settlement size	+ 0.001	+ 0.002				– 0.002					+ 0.001		Settlement size
Has ever had Internet at home	– 0.018	– 0.034	– 0.019	– 0.004	– 0.006	– 0.011		– 0.001		– 0.003	+ 0.001		Has ever had Internet at home
Has sent 1+ emails last week	– 0.049	– 0.084	– 0.046	– 0.014	– 0.026	– 0.031	+ 0.003		– 0.004				Has sent 1+ emails last week
Reg. use Internet 1 hour/week	– 0.073	– 0.068	– 0.057	– 0.013	– 0.023	– 0.034	+ 0.006		– 0.006			– 0.001	Reg. use Internet 1 hour/week
Has none of mentioned skills	+ 0.029	+ 0.038	+ 0.024	+ 0.005	+ 0.008	+0.018				– 0.003		+ 0.011	Has none of mentioned skills
Has 3 listed skills	– 0.015	– 0.015	– 0.013	– 0.003	– 0.004	– 0.006					+ 0.002		Has 3 listed skills
Has all 5 listed skills	– 0.011	– 0.012	– 0.005	– 0.003	– 0.009	– 0.005	+ 0.001		– 0.001				Has all 5 listed skills
Has used an office programme	+ 0.011	+ 0.014	+ 0.009	+ 0.003	+ 0.006	+ 0.006						+ 0.004	Has used an office programme
Has any PC skills needed at work	– 0.030	– 0.031	– 0.013	– 0.006	– 0.012	– 0.019							Has any PC skills needed at work
N	6895	6895	6895	6895	6895	6895	5636	5636	5636	3533	3534	3512	N
Minimum	1	1	1	1	1	1	0	0	0	0	0	0	Minimum
Maximum	3	3	3	3	3	3	1	1	1	10	10	10	Maximum
Mean	1.64	1.55	1.57	1.85	1.84	1.80	0.11	0.02	0.79	5.18	3.41	1.45	Mean
Standard Dev.	0.49	0.51	0.50	0.37	0.38	0.41	0.32	0.13	0.41	4.00	3.58	2.65	Standard Dev.
Coeff of variation	29.88	32.90	31.85	20.00	20.65	22.78	290.91	650.00	51.90	77.22	104.99	182.76	Coeff of variation

Notes: 1) The positive (+) or negative (–) signs before each r^2 value indicate only the direction of the underlying relationship revealed in order to ease interpretation. All r^2 are themselves, of course, mathematically positive (+); 2) All blank cells are non-significant correlations at 90% or 95% level.

Table 3-6: Regional identity and ICT – respondent level (2)

Coefficients of determination r^2		Indicator Sub Area 2.1 Sense of regional identity		Indicator Sub Area 2.2 Use of traditional regional media			Indicator Sub Area 2.3 Residential preference				
		Strong sense of regional identity	Weak sense of regional identity	Read regional/ local news-paper in last 4 weeks	Heard regional / local radio in last 4 weeks	Seen regional/ local TV in last 4 weeks	Prefers to stay in region	Prefers to move from region but stay in country	Prefers to move abroad		
Indicator Sub Area 2.2 Effect of Internet & email on regional identity	Effect of Internet & email is greater regional identity	+ 0.008	– 0.004	– 0.003	– 0.001	– 0.002	+ 0.008	– 0.002	– 0,001	States effect of Internet is greater regional identity	**Indicator Sub Area 2.2 Effect of Internet & email on regional identity**
	Effect of Internet & email is less of regional identity				+ 0.002				+ 0,002	States effect of Internet is less of regional identity	
	Internet & email has no effect on regional identity	– 0.007	+ 0.003	+ 0.002	+ 0.001	+ 0.003	– 0.004	+ 0.001		States Internet has no effect on regional identity	
N		11073	11073	11200	11200	11200	11071	11071	11071	N	
Minimum		0	0	1	1	1	0	0	0	Minimum	
Maximum		1	1	3	3	3	1	1	1	Maximum	
Mean		0,43	0.10	1.18	1.28	1.26	0.73	0.11	0.08	Mean	
Standard Deviation		0,50	0.30	0.38	0.45	0.45	0.45	0.32	0.27	Standard Deviation	
Coefficient of variation		116,28	300.00	32.20	35.16	35.71	61.64	290.91	337.50	Coefficient of variation	

Notes:
1) The positive (+) or negative (–) signs before each r^2 value indicate only the direction of the underlying relationship revealed in order to ease interpretation. All r^2 are themselves, of course, mathematically positive (+).
2) All blank cells are non-significant correlations at 90% or 95% level.
3) Using the 'residential preference' and 'sense of regional identity' variables in a raw form – that is not divided into answer categories – does not add anything to the overall analysis; the correlations are still small and supports the 'findings' reported above.

At the respondent level there are no correlations with location in northern or southern Europe, or along the core-periphery continuum, for ICT impact on regional identity. However, Table 3-5 does show that within the other trends identified, respondents living in larger settlements tend to use regional Internet services more than average for practical purposes (such as opening times) as opposed to local government web-sites.

It must be re-emphasised that all the associations between indicators in Tables 3-5 and 3-6 are very weak, and that even though there are some explicable stories to be told they are not as clear cut as when looking at the concept of regional identity alone (as in Tables 3-1 to 3-4), and that as soon as we introduce the effect of ICT on this, the patterns become less clear and more difficult to interpret at least at the respondent level.

3.2.2 Regional variation

Table 3-7 below is a matrix showing coefficients of determination between selected regional identity and ICT indicators and other selected indicators at regional level. All those shown are significant and many show relatively high levels of association between variables. The greatest level of association is over 43% and most are well over 20%. In addition to this, many consistent patterns in the data are found, and most of these support the conclusions found in section 3.2.1 but with much stronger evidence.

In relation to the use of the Internet for regional purposes, two different patterns are evident. Firstly, using the Internet to get involved in neighbourhood, charity, welfare and voluntary organisations at local and regional level is much more likely to take place in agricultural areas, which, referring back to section 3.1.2, are regions with high levels of regional identity and generally lower ICT usage and skills. In contrast, the reverse is the case in areas strong in tertiary employment, as shown in Figure 3-5.

Figure 3-5: Proportion of employment in a) the primary sector and b) services against percentage of internet users who have visited a web-site of a regional neighbourhood, charity, welfare or voluntary organisation

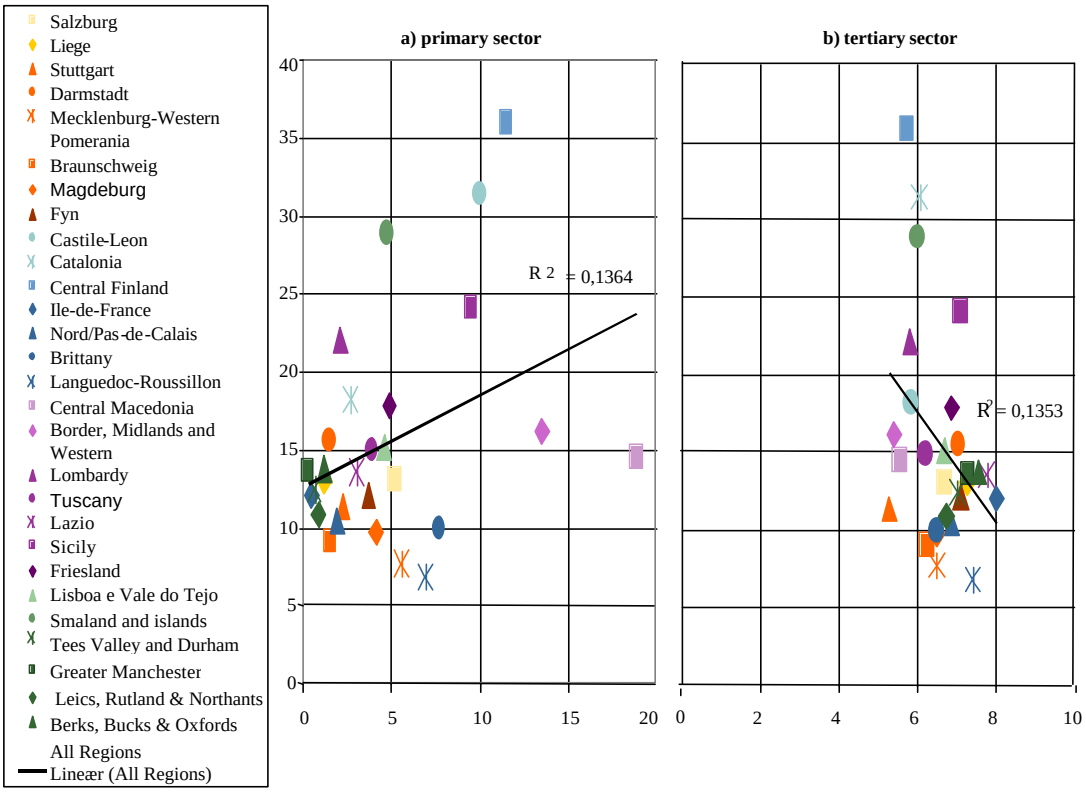


Table 3-7: Regional identity and ICT – regional level (1)

Coefficients of determination (r^2)	Indicator Sub Area 2.1 Use of the Internet for regional purposes		Indicator Sub Area 2.2 Effect of Internet & email on regional identity			Indicator Sub Area 2.3 Location of email partners		
	Has visited web-site of neighbourhood, charity, welfare, voluntary org	Has checked for opening times, addresses and other practical information	States Internet & email gives greater sense of regional identity	States Internet & email gives less sense of regional identity	States Internet & email has no effect on regional identity	Email partner in region	Email partner outside region but in country	
Primary sector	+ 0.136	– 0.116*	+ 0.351		– 0.430			Primary sector
Secondary sector		+0.143						Secondary sector
Tertiary sector	– 0.135		– 0.222		+ 0.127*			Tertiary sector
High Tech sector		+0.190			+ 0.154			High Tech sector
R&D patents per working pop.		+0.324						R+D patents per working pop.
PPP		+0.134	– 0.129*		+ 0.155			PPP
Has ever had Internet at home		+0.285		– 0.362	+ 0.295			Has ever had Internet at home
Has used Internet last 12 months		+0.235		– 0.336	+ 0.326			Has used Internet last 12 months
Has sent 1+ emails last week		+0.322		– 0.221	+ 0.300			Has sent 1+ emails last week
Has used PC in last 4 weeks		+0.255		– 0.309	+ 0.291			Has used PC in last 4 weeks
Reg. use Internet 1 hour/week		+0.338		– 0.287	+ 0.330			Reg. use Internet 1 hour/week
Has none of mentioned skills		–0.252		+ 0.271	+ 0.302		+ 0.101*	Has none of mentioned skills
Has 3 listed skills		+0.207		– 0.276	– 0.187	– 0.132*	+ 0.133	Has 3 listed skills
Has 5 listed skills		+0.183		– 0.114*	+ 0.164	– 0.289	+ 0.208	Has 5 listed skills
Has used an office programme		+0.208		– 0.257	– 0.330	– 0.119*	+ 0.120*	Has used an office programme
Has any PC skills needed at work		+0.388		– 0.227*	+0.258	– 0.118	+ 0.139	Has any PC skills needed at work
Minimum	6.80	22.90	5.80	0.00	65.50	3.60	1.30	Minimum
Maximum	35.90	65.80	22.20	6.20	89.80	7.70	5.40	Maximum
Mean	15.50	44.01	11.66	1.82	78.32	5.25	3.34	Mean
Standard Deviation	7.04	11.29	4.38	1.42	5.40	1.12	0.99	Standard Deviation
Coefficient of variation	45.42	25.65	37.56	78.02	6.89	21.33	29.34	Coefficient of variation

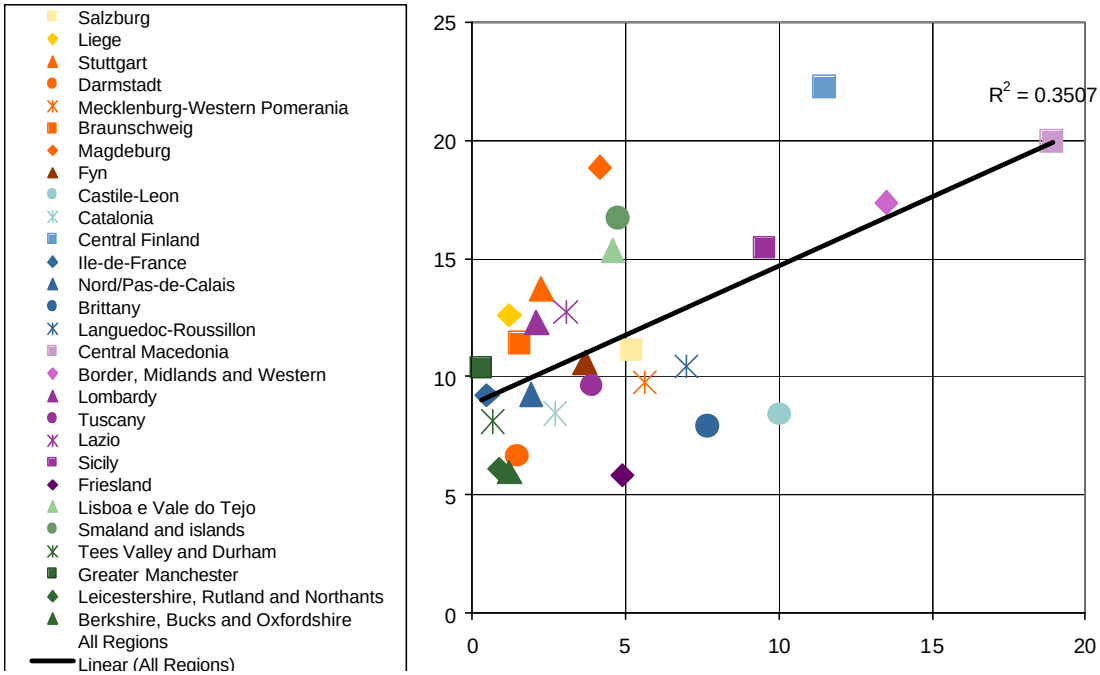
Notes: 1) N is 28; 2) The positive (+) or negative (–) signs before each r^2 value indicate only the direction of the underlying relationship revealed in order to ease interpretation. All r^2 are themselves, of course, mathematically positive (+); 3) All blank cells are non-significant correlations at 90% or 95% level.

* Significant at 90% level, otherwise significant at 95% level.

Second, the more instrumental use of regional web-sites for opening times and other practical information is more likely to take place in non-agricultural areas, which according to section 3.1.2 are regions with relatively low levels of regional identity, regions with high ICT usage and skills, and regions with a high proportion of R&D patents to the working population.

Respondents in regions strong in agricultural employment also tend to think that the use of Internet and email will strengthen their already relatively high regional identity (see Figure 3-6), whereas respondents in regions strong in service and high tech employment tend to think that the use of Internet and email has no effect on regional identity. The PPP indicator also supports this dichotomy.

Figure 3-6: Proportion of employment in the primary sector against percentage of recent internet users who state effect of internet and e-mail is greater sense of identity with region.



Respondents with high ICT usage and skills tend to think that the use of Internet and email will not have a negative effect on regional identity and also that it will have no effect. This is evidence for this group imagining that the effect of ICT is not incompatible with regional identity, even if it does not directly promote it.

Finally, as expected, there is a clear positive correlation between high ICT usage and skills and email partners outside the region, and a negative correlation with email partners within the region. See, for example, Figure 3-7.

Table 3-8 directly relates indicators measuring regional identity and ICT to the general regional identity indicators at regional level, and again supports the conclusions from section 3.2.1 but with much stronger evidence. Those who have a strong sense of regional identity use the Internet to access regional news more often than those who have a weak sense of regional identity. They are also much more likely to think that using the Internet and email will further strengthen regional identity. Finally, respondents with high ICT usage and skills tend to have a weak sense of regional identity.

Figure 3-7: Percentage of computer users who have all 5 of the listed skills against average percentage of e-mail partners located in region

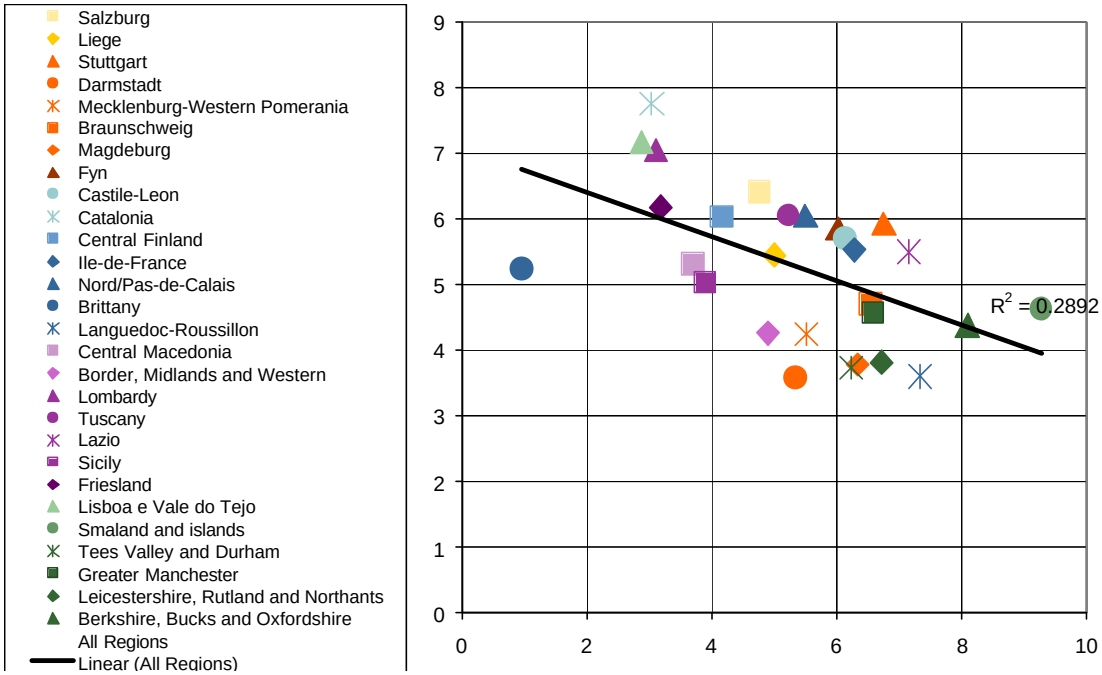


Table 3-8: Regional identity and ICT – regional level (2)

Coefficients of determination (r^2)	Sense of regional identity	
	Strong sense of regional identity	**Weak sense of regional identity**
Got news on region on Internet	+ 0.118	– 0.217
States Internet & email gives greater sense of regional identity	+ 0.211	– 0.164
Have ever had Internet access at home	– 0.158	+ 0.203
Regularly use Internet 1 hour/week	– 0.107*	+ 0.159
Sent 1+ email(s) in last week	– 0.109*	+ 0.245
Has used an office programme		+ 0.330
Has used Internet in last 4 weeks		+ 0.196
Has used PC in last 4 weeks		+ 0.224
Has none of mentioned skills		– 0.254
Has 3 listed skills		+ 0.185
Minimum	23.40	1.30
Maximum	69.50	22.00
Mean	43.15	10.16
Standard Deviation	12.58	4.90
Coefficient of variation	29.15	48.23

Notes: 1) N=28; 2) *' significant at 90% level; 3) The positive (+) or negative (–) signs before each r^2 value indicate only the direction of the underlying relationship revealed in order to ease interpretation. All r^2 are themselves, of course, mathematically positive (+); 4) All blank cells are non-significant correlations at 90% or 95% level.

Table 3-9 shows the results of splitting responses to the regional identity indicator into, on the one hand, a southern and northern European group, and, on the other, three groups representing core, intermediate and peripheral regions, and then testing whether or not there is a significant difference between the means of the different groups. It can be seen that there is quite a strong positive association between email partners in the region with southern Europe location, and the opposite association with email partners outside the region. An even stronger positive association is seen between a core region location and thinking that the use of Internet and email has no effect on regional identity.

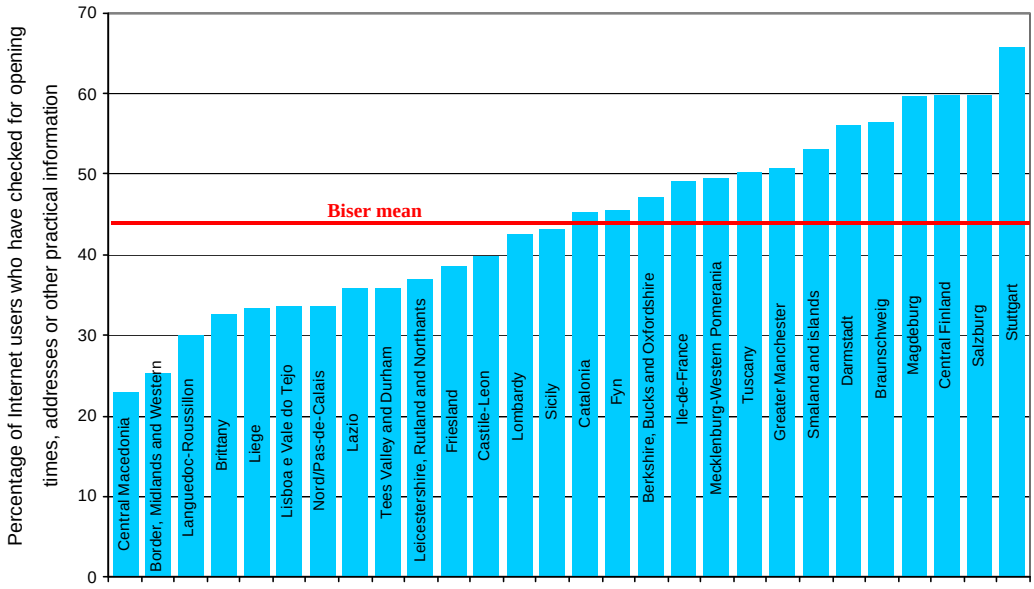
Table 3-9: Location of region – regional level

eta coefficients	**Northern/southern Europe (1=north; 2=south)**	**Core-periphery (1=core; 2=intermediate; 3=periphery)**
State Internet & email have no effect on regional identity		– 0.246
Email partners in region	+ 0.217	
Email partners outside region but in country	– 0.235	

Notes:
1) N=28.
2) The positive (+) or negative (–) signs before each eta coefficient indicate only the direction of the underlying relationship revealed in order to ease interpretation. All eta coefficients are themselves, of course, mathematically positive (+).
3) See Annex 1 for designation of north-south Europe and core-intermediate-periphery
4) All cells with data are significant at 90% or 95% level.

The coefficients of variation and the differences between minimum and maximum values from Table 3-7 show that the indicator 'Internet users who have checked for opening times, addresses or other practical information' discriminates very strongly between regions, as illustrated in Figure 3-8 below. This, coupled with the fact that it often correlates strongly with other indicators, makes it potentially a very useful indicator.

Figure 3-8: Percentage of Internet users who have checked for opening times, addresses or other practical information



Base: respondents who have used the Internet in the last 12 months, weighted data. Data source: BISER RPS 2003

As was the case for regional level data concerning regional identity, the regional level data measuring regional identity and ICT gives much stronger associations between indicators than the corresponding respondent level data. This is probably also the reason why the regional level data tell a clearer, less ambiguous, story than the respondent level data, although there may be some small element of statistical bias given that less data variation is possible with only 28 sets of regional observations at an aggregated level. However, the data overall do confirm the impression that the regional 'variable' is in fact very important in explaining differences in regional identity and the effects of ICT on regional identity. In other words, regional identity and the effect of ICT on it does vary strongly by region (as we have seen) and if the regional factor is removed from the analysis, as happens when respondent level data is used, most of the explanatory power we see disappears.

Further, within each of the five countries in the BISER survey with more than one region (France, Germany, Italy, Spain and UK) there is no clustering of regions, which shows that the country level, like the respondent level, does not explain much of the variation in the data. Overall, therefore, this is a strong indication that the socio-economic characteristics of the region within which the respondent lives are much more important in explaining the variation of the data than the socio-economic characteristics of either the respondent themselves as an individual or the country within which s/he lives.

3.3 Tentative policy implications

The results presented in this report show that European regional policy, with its often specific and conscious focus on regional identity in rural, more peripheral and economically weaker areas (e.g. in the Leader programme and in the ERDF Innovative Actions aimed at Objective 1 and 2 regions), is perhaps justified.

Such regions tend to have a relatively resource-poor environment, making it more likely that regional decision-makers will clutch at any other straw available. Putting a more positive interpretation on this, one could conclude that the rallying cry of regional identity, in attempting to galvanise regional development, is one that regional inhabitants can respond to in a situation where they have long experienced relative and maybe even absolute decline and deprivation.

Emphasising regional identity can thus be seen as an eminently practical and sensible dimension to a regional development strategy in relatively disadvantaged areas. At national level this could be seen, perhaps cynically, as a form of nationalism, for example in the "Buy British" consumer campaigns of the recent past in the UK, and most countries have similar examples. But one can conclude that regional decision-makers in rural and more peripheral areas are attempting to apply leverage to something that does have conscious meaning and value for inhabitants. Their efforts are thus probably not entirely in vain.

This report has also shown that in such relatively disadvantaged regions, ICT can be used to support regional identity and thereby social, and also perhaps, economic development. There needs to be a conscious focus on regional ICT resources, for example in relation to community development, on the one hand, and regional trading networks on the other. Leakages out of the regional system are, however, inevitable, especially in the latter case as ICT invariably also encourages trans-regional, national and even global networking. This, perhaps, is the main policy dilemma arising from the impact of ICT on regional identity. For example, where a strong and positive regional identity is instrumental in attracting population, workers, students and new growth, this is likely in turn to undermine existing identity because of the looser attachments newcomers have to the region and the wider attachments existing residents will develop. (OECD, 2001).

In more prosperous and economically dynamic regions, an appeal to regional identity amongst citizens and households seems, in general, unlikely to be a viable mainstream policy approach. Although there will always be exceptions, such regions are characterised by a more mobile (geographically and socio-economically) population and workforce, which tend to

be younger, posses higher qualifications and ICT skills and whose use of ICT is already relatively advanced. Such groups, as is demonstrated in this report, have much lower awareness of regional identity, and are much less likely to use regional ICT resources as opposed to general ICT resources. However, such prosperous regions do also tend to be more heterogeneous and are liable to contain groups who are less mobile, such as the more elderly, those possessing fewer skills, perhaps certain minorities, etc., who may well respond to a focus on regional identity (or to an identity characterised by a spatially defined group) if targeted specifically at them.

Despite all the positive connotations surrounding the concept of regional identity, most of which are undoubtedly valid especially from a social-cultural perspective, and assuming these are not taken as far as regional introversion and mistrust of outsiders, there is a clear negative correlation with economic growth and prosperity. Perhaps, one of the tricky policy implications of this is the desirability of achieving a balance between the positive benefits of regional identity, both in the absence of and as supported by ICT, and economic prosperity with its inevitably more mobile, footloose and globalised character.

Having said this, regional identity could also be defined as part of the regional governance system in terms of regional development plans, statistics and implementation processes, where it is undoubtedly important. However, this in itself does not imply that it is anyone other than the regional governing and decision-making class who hold such regional identity awareness, and certainly not the population or workforce at large. In terms of policy, however, this aspect of regional identity is, of course, extremely important.

4 Conclusions

The results and conclusions presented in this report, about measuring regional identity, its importance and its relationship to ICT, both generally and at the regional level, can only be indicative and heuristic. This is because of the relatively small sample sizes and the lack of deep qualitative analysis at a regional level, for example of regional history, socio-economic developments, culture, politics, the institutional and legal landscape, physical and human geography, etc. The latter will, however, be tested by regional experts in each of the 28 BISER regions at a later date.

Overall, only very weak patterns of regional identity, as well as of its relation to ICT, emerge at the individual respondent level. However, the patterns are much stronger at the regional level, and generally support the tentative explanations given at the respondent level. This indicates that the regional 'variable' is very important in explaining differences in regional identity and the effects of ICT. In other words, regional identity and the manner in which it is affected by ICT, does depend to a significant extent on regional rather than non-regional characteristics. Further, within each of the five countries in the BISER survey with more than one region (France, Germany, Italy, Spain and UK) there is no clustering of regions, which shows that the country level, like the respondent level, does not explain much of the variation in the data. Overall, therefore, this is a strong indication that the socio-economic characteristics of the region within which the respondent lives are much more important in explaining the variation of the data than the socio-economic characteristics of either the respondent themselves as an individual or the country within which s/he lives.

There are two headline results of the analysis in this report:

- A high level of regional identity, as defined by the BISER research (see section 2.2), is strongly correlated with comparatively weak and more peripheral regions with high relative levels of primary employment. Respondents in such areas tend to be older, have lower levels of education, fewer skills, use ICT less, and also show a strong desire not to move out of their region compared to respondents elsewhere. Traditional media are used to maintain and promote regional identity and development in such areas, particularly regional newspapers and regional radio. TV usually has opposite correlations than reading a regional newspaper or listening to regional radio. Perhaps the use of TV is more likely to be dominated by national and international programming than either

newspapers or radio, and that the latter two lend themselves more readily to a regional focus.

- In regions where respondents do demonstrate strong regional identity, ICT can be used to further support and promote it, and this seems to have beneficial social if not economic effects. In more prosperous core regions, with greater levels of tertiary and high tech employment and generally younger, more mobile, qualified and skilled inhabitants, regional identity is a much less important factor. These regions use ICT much more than their weaker counterparts but the specific role of regional ICT and ICT's support for regional identity is also much less.

Overall, therefore, we have a picture which shows that regions which tend to be weaker economically with lower levels of activity and population demonstrate a much stronger sense of regional identity than economically stronger, more diverse and more populous regions. The older respondents who use ICT less and who live in such regions are more likely to have a stronger sense of regional identity. However, these older, less educated respondents with fewer ICT skills, tend also to be relatively more likely to use regional Internet services than more general Internet services.

Further, in terms of respondents' views on the effect of Internet and email on their sense of regional identity, there is evidence that older respondents with lower educational levels in more peripheral areas tend to think that the effect is positive. However, so do respondents with higher ICT usage and skills, at least they do think that the use of Internet and email will not have a negative effect on regional identity and also that it will have no effect. This is evidence for this group imagining that the effect of ICT is not incompatible with regional identity, even if, for them, it does not directly promote it.

We are perhaps seeing at least two different trends here, one in relation to age and overall educational levels and one in relation to specific ICT skills and usage. Although it may be the case that a clear and unambiguous pattern emerges about the types of regions where regional identity is strong and where it is weak, the impact of ICT on regional identity is less straightforward, and clearly seems to be affecting different groups for different reasons.

For example, those respondents who think that the effect of using Internet and email will strengthen regional identity also tend to use traditional regional media less often, even though they are likely to live in regions with strong regional identity. This different trend somewhat complicates the overall pattern but is perhaps explicable. One trend counterpoises an existing strong sense of regional identity with thinking that use of ICT will strengthen this. The other trend relates the use of traditional regional media to less readiness to accept that ICT will strengthen regional identity, perhaps because it may be difficult for those respondents who use traditional media heavily to accept that ICT media could have the same effect. Regional Internet seems to be filling a need for those who have a strong sense of regional identity but are less prone to use traditional regional media.

To summarise, the effect of Internet and email on sense of regional identity is influenced by the type of region:

- In regions where respondents do demonstrate strong regional identity (the weaker regions), ICT can be used to further support and promote it, and that this seems to have beneficial social if not economic effects:
    - these regions use ICT much less than their stronger counterparts but the specific role of regional ICT and ICT's support for regional identity is much greater.
- In more prosperous core regions, with greater levels of tertiary and high tech employment and generally younger, more mobile, qualified and skilled inhabitants, regional identity is a much less important factor:
    - these regions use ICT much more than their weaker counterparts but the specific role of regional ICT and ICT's support for regional identity is much less.

Further, the effect of Internet and email on sense of regional identity is also influenced by the type of social group:

- older respondents with lower educational levels tend to think that the effect is positive.

- respondents with higher ICT usage and skills tend to think that the effect is not negative effect or that it will have no effect.
- respondents with high use of traditional regional media tend to think the effect is negative -- thus groups who already have a strong sense of regional identity tend to be split into two groups:
    - those who use traditional media more -- do not think regional ICT is useful
    - those who use traditional media less -- do think regional ICT is useful.

When we look at the use of the Internet for regional purposes, again more than one pattern is evident. Firstly, using the Internet to access regional news and to get involved in neighbourhood, charity, welfare and voluntary organisations at local and regional level is much more likely to take place in areas of high primary employment, which, as we have seen, are regions with high levels of regional identity and generally lower ICT usage and skills. Clearly, in such areas, community related web-sites and Internet services are likely to be a direct expression of strong regional identity and will be used to support it. On the other hand, the more instrumental use of regional web-sites for opening times and other practical regional information is more likely to take place in tertiary employment areas, which are regions with relatively low levels of regional identity and high ICT usage and skills.

Thus, the use of Internet for regional purposes is characterised in the two main types of region:

- In areas of strong regional identity:
    - Internet is used less
    - but is used relatively more for regional rather than general purposes
    - and is focused on regional news and neighbourhood, charity, community, welfare and voluntary organisations.
- In areas of weak regional identity:
    - Internet is used more
    - but is used relatively less for regional rather than general purposes
    - except that use is made of regional ICT for practical information like opening times, addresses, etc.

Overall, the BISER research has been able to give some sensible and practical answers to the question 'what is meant by regional identity?' BISER has also been able to unravel and explain some of the impacts of ICT on regional identity in an information society / knowledge economy context. It has not been possible to analyse the relationship between local/regional identity to national identity and other types of identity, and whether or not it is in conflict with globalisation. Some hints have been given, however, for example that it may be difficult, at one level, to reconcile the forces of globalisation and regional identity using ICT, although at another level and in the right context and by applying the right policies, ICT can enhance regional identity and social, if not economic, development.

This is one area for further research, as is the possible distinction between local and regional identity, and whether the idea of a region is equally understood across the regions. Indeed, the concept of regional identity and the impact on it of ICT, itself requires more research which can build upon the tentative conclusions presented here.

In conclusion, regional identity and the impact upon it of ICT, certainly as measured by the BISER survey, is a powerful concept which successfully discriminates between NUTS II regions and provides substantial explanatory power, both about regional variation but also in terms of regional development processes.

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6 Annex

6.1 Regional designations: north-south Europe and core-periphery

Location of respondents – regions which are core, intermediate or periphery, and northern or southern Europe.

REGION	Country	Type	Core-Intermediate-Periphery	North-South Europe
Salzburg	AT	AGR./High GDP	**I**	**N**
Liege	BE	SRV./Low GDP	**I**	**N**
Stuttgart	DE	MAN./High GDP	**I**	**N**
Darmstadt	DE	SRV./High GDP	**I**	**N**
Mecklenburg-Western Pomerania	DE	AGR./Low GDP	**P**	**N**
Braunschweig	DE	MAN./High GDP	**I**	**N**
Magdeburg	DE	MAN./Low GDP	**I**	**N**
Fyn	DK	SRV./High GDP	**I**	**N**
Castile-Leon	ES	AGR./Low GDP	**P**	**S**
Catalonia	ES	MAN./Low GDP	**I**	**S**
Central Finland	FI	AGR./Low GDP	**P**	**N**
Ile-de-France	FR	SRV./High GDP	**C**	**N**
Nord/Pas-de-Calais	FR	MAN./Low GDP	**P**	**N**
Brittany	FR	AGR./Low GDP	**P**	**N**
Languedoc-Roussillon	FR	AGR./Low GDP	**P**	**S**
Central Macedonia	GR	AGR./Low GDP	**P**	**S**
Border, Midlands and Western	IE	AGR./Low GDP	**P**	**N**
Lombardy	IT	MAN./High GDP	**I**	**S**
Tuscany	IT	MAN./High GDP	**I**	**S**
Lazio	IT	SRV./High GDP	**C**	**S**
Sicily	IT	AGR./Low GDP	**P**	**S**
Friesland	NL	MAN./Low GDP	**P**	**N**
Lisboa e Vale do Tejo	PT	MAN./Low GDP	**C**	**S**
Smaland and islands	SE	MAN./Low GDP	**I**	**N**
Tees Valley and Durham	UK	SRV./Low GDP	**I**	**N**
Greater Manchester	UK	SRV./Low GDP	**C**	**N**
Leicestershire, Rutland and Northants	UK	MAN./High GDP	**I**	**N**
Berkshire, Bucks and Oxfordshire	UK	SRV./High GDP	**I**	**N**