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Quality of Jobs and Innovation Generated Employment (QuInnE) Reflections to Project Proposal

Günther Schmid

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www.guenterschmid.eu

QuInnE's claims of innovation

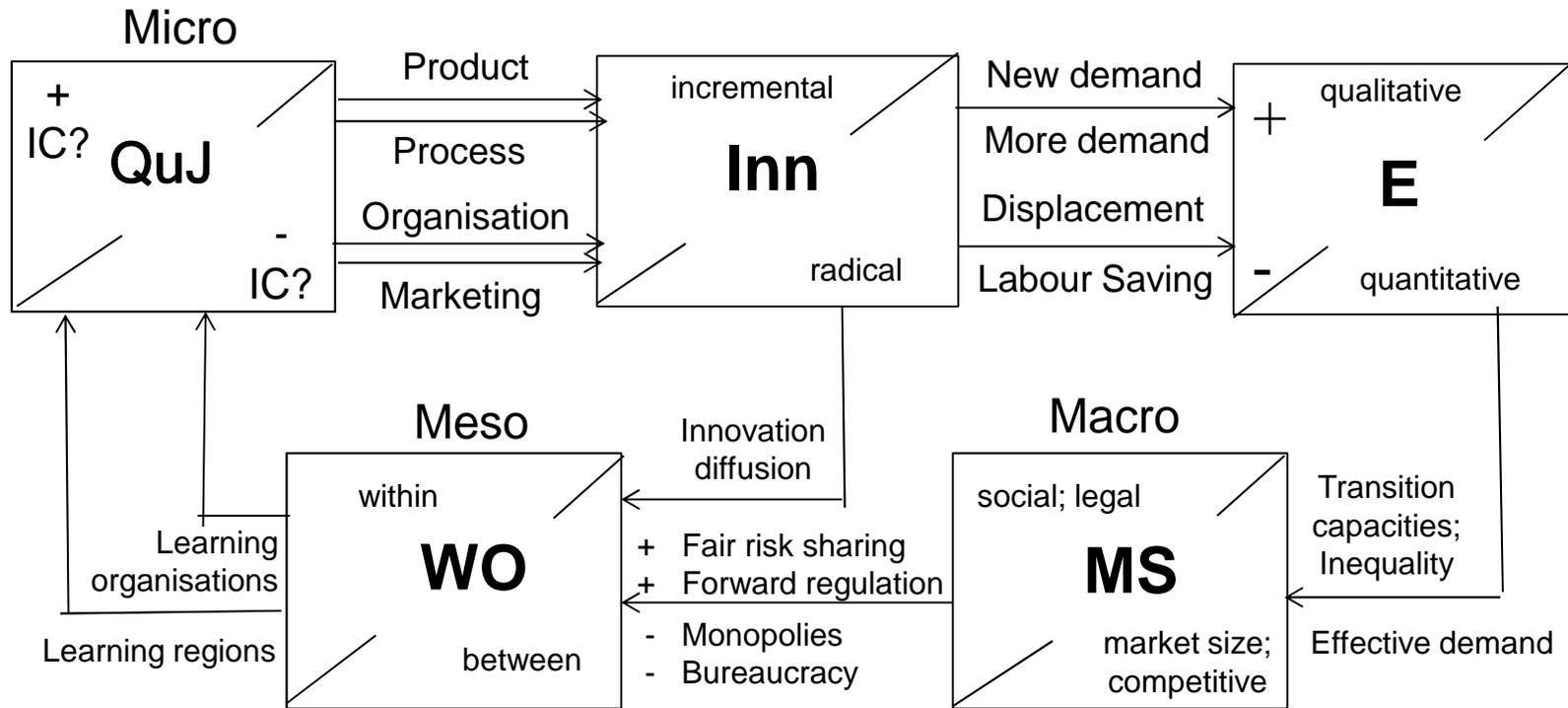
- I. New conceptual framework for causal analysis
- II. New typology of QuJ and Inn (3xD)
- III. New typology of E (4xS)
- IV. Policy recommendations
- V. Improving EU-data on Inn (IUS)
- VI. Web-based intervention and diagnostic tools

I. New conceptual framework for causal analysis: Suggestions for improvements

1. Strengthen **multilevel** approach both at qualitative and quantitative analysis
2. Make the multilevel **causal** framework more explicit and try to derive testable hypotheses from it

Here comes a proposal:

QuInnE-Model



WO = Work organisation; MS = Market Structure; IC = Innovative capacity

© GüS

I./II. Conceptual framework; typology, causal analysis: Suggestions for improvements - 1 Micro

- What is the **innovative capacity** of job quality indicators / characteristics?
- E.g.: Firms have an **insurance motive** in terms of hiring and qualification strategies
- This could be tested by measuring the difference between actually required skills / qualification of the job and the existing skills / qualification of individuals on the job
- **PIAAC** has such information

I./II. Conceptual framework, typology; causal analysis: Suggestions for improvements - 2 Micro

- What is the **innovative capacity** of job quality indicators / characteristics?
- E.g.: Jobs with innovative capacities often require **transversal** (methodological) skills
- This could be tested by measuring transversal job requirements and contrast this with corresponding individual's abilities, as the following table suggests:
- **PIAAC**, again, might have this information

Requirements of transversal skills in occupational areas

Multiple percentages; source: Baethge 2011, extract from figure 4

	Making complex issues understandable	Solving unpredictable problems	Making difficult decisions	Detecting and closing knowledge gaps	Coping with many different tasks
Production occupations	18.7	44.1	34.0	20.8	63.2
Primary service occupations	25.5	40.8	32.0	21.7	65.2
Secondary service occupations	60.6	67.7	55.6	39.0	81.4

**I./II. Conceptual framework, typology; causal analysis: Suggestions for improvements - 3
Micro**

- The **innovative potential of 'flexible' jobs** seems to be ambivalent whereas most of this jobs are characterised as bad jobs for various reasons (low wages, low security etc.)
- QuInnE might put an emphasis on this tricky relationship between QuJ and Inn and E
- following seminal studies like:

Hirsch, Boris and Steffen Müller (2012), The Productivity Effect of Temporary Agency Work - Evidence from German Panel Data, in: The Economic Journal, 122 (562), F216-F235

- This study investigates the effect of temporary agency work (TAW) on the user firm's **productivity** (indirectly on **innovation**). Authors hypothesise: using TAW to enhance numerical flexibility and to screen job candidates may increase productivity, whereas temporary workers' lower firm-specific human capital and spillover effects on the user's permanent employees may adversely affect productivity.
- The authors exploit a large panel data set and control for time-invariant and time-varying unobserved heterogeneity by using the GMM estimator. They find a **robust hump-shaped** effect of the extent of temporary agency work on the user firm's productivity.
- GüS: Hints to the importance of establishing the right balance of open-ended (**investment related**) and fixed-term contracts

Zhou, Haibo and Ronald Dekker, Alfred Kleinknecht (2011), Flexible Labor and Innovation Performance: Evidence from Longitudinal Firm-level Data, in: Industrial and Corporate Change, 20 (3), 941-968

- Firms with high shares of workers on fixed-term contracts tend to have higher sales of **imitative new products** but perform significantly worse on sales of **innovative new products**
- High functional flexibility in "insider-outsider" labour markets enhances a firm's new product sales, as do training efforts and highly educated personnel. Authors find weak evidence that larger and older firms have higher new product sales than do younger and smaller firms //see also Paper in Economic and Industrial Democracy, March 2015//
- GüS: a) Food against making unqualified pleas for LM-deregulation; b) distinguish **“garage business innovation”** and **“routine innovation”**
See also Kleinknecht et al. (2013) in Selected Literature

I./II. Conceptual framework; typology; causal analysis: Suggestions for improvements – 4 Innovation

- What is **Innovation**? I think it needs, first, a precise definition, and apart from being “incremental” or “radical”, second
- acknowledgement that the InnCap of a firm also exists in quickly adopting innovations
- In other words: Is the **work organisation open to innovation diffusion**?
- Third, clear distinction has to be made between **invention** and innovation →

Innovation: Proposal for a definition

- An innovation is an invention (necessary condition) transformed into a marketable product or business model
- Sufficient condition for such a transformation is the combination of a product idea, (often large) risk capital, organisational innovation (skilled workers in a workplace environment rewarding creativity + aggressive marketing)

- MP3 as a paradigm:

MP3 is an audio coding format for digital audio which uses a form of data compression for consumer audio streaming or storage on the basis of the psychological insight that human hearing is based on a restricted range of sounds so that the amount of data can be greatly reduced and still sound like a faithful reproduction of the original uncompressed audio (extracted from Wikipedia)

- Invented by → Karlheinz Brandenburg (PhD Thesis 1989) and German Fraunhofer Institute (1995), yet transformed by Apple via iPod (2001) / iTunes (2001/03) into innovation

I./III. Conceptual framework; typology; causal analysis: Suggestions for improvements – 1 Employment-Quality

- The four “S” (stepping stones, sticky, springboard, stretchy) sound fine, but are they distinctive categories? How can I see whether a job is S1, S2, S3, S4?
- How are their supposed functions operationalised? Sticky jobs, e.g., favourable to LTU or rather job maintenance jobs that exclude outsiders!?
- Might TLM framework be helpful? In particular “**transition matrices**” (vertical, horizontal) **Examples** → “**transition capacities**” (Korver/Schmid 2012) and “**transition sequences**” (Brzinsky 2011, Eurofound 2014)

Yearly (vertical) Transitions of West-German Women, age 20-55 (2000-06)

Message: Work first plus training to increase upward wage mobility

Source: GSOEP and Mosthaf/ Schank/ Schnabel (2009)

	t + 1				
	High Wages	Low Wages	Unemployed	Inactive	Total
t (Year)					
High Wages	87.4	6.8	1.3	4.6	100
Low Wages	27.3	61.8	3,0	8,0	100
Unemployed	16.4	20.1	33.4	30.0	100
Inactive	5.9	4.9	4.6	84.7	100
Total	51.1	14.4	3.5	30.9	100

(Horizontal) Transitions from Learned Occupation to Actual Occupation

Source: Helmrich et al. 2012, [excerpt from Table 5](#), p. 7

	2	3	8	10	11	12	Σ
2 Manufacturing occupations, repairing etc.	46.3	8.0	7.0	1.1	1.3	0.5	100%
3 Maschines and facility controlling or servicing occupations	15.6	42.3	7.6	2.6	1.4	0.5	100%
8 MINT-occupations	7.5	2.5	52.8	3.4	1.7	3.6	100%
10 Media, human and social science occupations, artists	1.5	0.6	5.8	46.5	3.8	12.8	100%
11 Health and care occupations	2.2	0.4	0.8	1.0	71.8	3.4	100%
12 Teaching occupations	0.7	0.3	2.3	2.2	4.7	79.6	100%
Without occupational training	16.6	5.3	2.3	2.3	4.6	0.9	100%

I./III. Conceptual framework; typology; causal analysis: Suggestions for improvements – 2 Employment-Inequality

- The three inequality dimension (gender, class, age) are – descriptively – okay, but how are they related to innovation?
- The **wage-inequality** dimension is, in my view, in particular relevant in terms of incentives and efficient labour allocation
- The test of one powerful conventional hypothesis should have some priority in QuInnE: **Is inequality favouring innovation?** And if yes: Which inequality?
- See the following influential article:

Acemoglu, Darn and James A. Robinson, Thierry Verdier (2012), Can't We All Be More Like Scandinavians? Asymmetric Growth and Institutions in an Inter-dependent World, NBER Working Paper No. 18441

- Authors show that [...] the world equilibrium is asymmetric: some countries will opt for a type of “cutthroat capitalism” that generates **greater inequality and more innovation** and will become the technology leaders, while others will freeride on the cutthroat incentives of the leaders and choose a more 'cuddly' form of capitalism
- Paradoxically, those with cuddly reward structures, though poorer, may have higher welfare than cutthroat capitalists; but in the world equilibrium, it is not a best response for the cutthroat capitalists to switch to a more cuddly form of capitalism
- GüS: So, someone has to be the bad guy!? Or, as
- **QulnnE might prove: Equity and Efficiency are not a “big trade-off” but complementary**

I./IV. Conceptual framework; causal analysis

Suggestions for improvements – 1

Macro-Policy recommendations

- The macro-institutional framework is crucial not only for the causal relationship between innovation and employment (in particular quantitative dimension of E),
- but also for making sensible policy recommendations (policy interventions usually impact through macro-institutional framing)
- For instance: To what extent are **redistributive social institutions** (like UI) fostering or hindering innovation?
- For example:

Boeri, Tito and Mario Macis (2010), Do Unemployment Benefits Promote or Hinder Structural Change?, in: Journal of Development Economics 93 (2010) 109-125

- Using yearly panel data from a large number of countries, authors evaluate the relationship between unemployment benefits (UB) and structural change. The study focuses on flows and relies on policy "experiments", notably the introduction from scratch of UB in many countries. Authors find a positive, sizable and significant effect of the introduction of UB on job reallocation, arising mainly from the **job destruction margin** although this effect fades away over time.
- UB also found to induce more sectoral shifts from agriculture to services
- GüS: Important hint to institutional context encouraging risk taking and thereby innovation on demand and supply side. **UI-coverage as an important element of job quality with innovative potential!**

I./IV. Conceptual framework; causal analysis

Suggestions for improvements – 2

Macro-Policy recommendations

- To generalise the argument: Innovation involves uncertainty, and uncertainty requires risk taking from both sides of the labour market
- So the question is which institutions foster such calculated risk taking? My general hypothesis is: It is **fair risk sharing** and mutual **trust** as institutional devices for long expectation horizons of cooperative actors required in investments related to innovation
- The argument is developed, for example, in Korver/Schmid (2012) and in:

Schmid, Günther (2015), Sharing Risks of Labour Market Transitions: Towards a System of Employment Insurance, in: British Journal of Industrial Relations, 53 (1), 70-93

- The increasing polarization of the LM is closely related to the spread of non-standard employment relationships that results from poor risk management of critical transitions over the life course
- Author argues for an extension of UI towards employment insurance (EI) by summarizing the concept of TLM and discussing the main features of an EI-system
- Main theoretical argument based on redistribution paradox (Domar-Musgrave effect, H.W. Sinn): **innovation effect of insurance may exceed moral hazard effect**; in particular true and relevant for investments into ‘human capital’
- GüS: Investment and participation in **CVET important indicator** for innovation and employment enhancing job quality

I./IV. Conceptual framework; causal analysis

Suggestions for improvements – 3

Macro-Policy recommendations

- **Product market regulation** is an important causal factor inducing or preventing innovation. Many studies find this factor even more important than LM regulation
- Of particular importance is **forward regulation** related to quality standards of products (also creating the long-term expectation horizon required for risky investments into innovation), including also subsidies (e.g. innovative hostile exemption from mineral oil tax)
- **Recommendation** to include respective indicators into the quantitative multilevel models

I./IV. Conceptual framework; causal analysis
Suggestions for improvements – 1
Meso-Policy recommendations

- **Work organisation (WO) within firms and between firms** are often neglected factors in modelling the relationship between JQ, Inn and E, yet important for enhancing **innovation diffusion**
- **Recommendation** to draw the attention to the concepts of “**learning regions**” (PPP, PP-networks, PC-networks [‘netarchy’]) for indicating good external network relationships, and
- “**learning organisations**” for indicating good internal or within work organisations **Reading suggestions →**

Cedefop (2011), Learning while working: Success stories on workplace learning in Europe, Luxembourg: Publications Office of the European Union

- From the preface: Supporting people to acquire the **skills that lay the foundations for innovation** and match future employment needs is one of the preconditions for surmounting the crisis.
- European citizens need to be supported to manage **working life transitions more effectively** and have access to opportunities to develop their skills.
- For **lifelong learning** to become a reality for all [...] **ordinary workplaces must become primary places of learning**. Achieving a culture in which employers and workers place a high value on skills and continued learning is a **shared responsibility**.
- **Innovation** in enterprises and **skill development reinforce** one another, innovation policies and training agendas should be brought together

The Cedefop (2011) study is okay re “good practices”, but to go beyond its conceptual platitudes, I recommend to start with some “classics” and “pioneers” of organisational learning:

- Granovetter, Mark (1983), The Strength of Weak Ties: A Network Theory Revisited, in: Sociological Theory, 1, 201-233
- Hall, Peter A. (1993), Policy Paradigms, Social Learning, and the State. The Case of Policy Making in Britain, in: Comparative Politics, 25 (3), 275-296
- Korver, Ton and Peter R.A. Oeij (2008), Employability Through Covenants: Taking External Effects Seriously, in: Ralf Rogowski (ed.), The European Social Model and Transitional Labour Markets - Law and Policy, Ashgate, pp. 143-169
- Sabel, Charles F. (1995), Bootstrapping Reform: Rebuilding Firms, the Welfare State, and Unions, in: Politics & Society, 23 (1), 5-48
- Staudinger, Ursula M. and Catherine E. Bowen (2011), A Systemic Approach to Aging in the Work Context, in: ZAF 44 (5), 295-306

Don't give up, even ...

Between the idea

And the reality

[...]

Between the conception

And the creation

[...]

Falls the Shadow [...]"

(T.S. Eliot, The Hollow Men, 1925)

Further Selected Literature

- Baethge, M. (2011), Qualifikation, Kompetenzentwicklung und Professionalisierung im Dienstleistungssektor, in: WSI-Mitteilungen, 64 (9), 447-56
- Brzinsky-Fay, C. (2011), School-to-Work Transitions in International Comparison, Tampere: Acta Universitatis Tamperensis 1663
- Eurofound (2014), Mapping Youth Transitions in Europe, Luxembourg, Publications Office of the European Union (European Foundation for the Improvement of Living and Working Conditions)
- Helmrich, R. und G. Zika, M. Kalinowski, M. I. Wolter (2012), Engpässe auf dem Arbeitsmarkt: Geändertes Bildungs- und Erwerbsverhalten mildert Fachkräftemangel. Neue Ergebnisse der BIBB-IAB-Qualifikations- und Bildungsprojektionen bis zum Jahr 2030, in: BIBB-Report 18/12, 14 S.
- Kleinknecht, A. und C.W.M. Naastepad, S. Storm, R. Verger (2013), Schadet die Flexibilisierung des Arbeitsmarktes der Innovation?, in: WSI-Mitteilungen 66 (4), 229-238
- Korver, T. And G. Schmid (2012), Enhancing Transition Capacities and Sustainable Transitions, in: J. de Munck, C. Didry, I. Ferreras, A. Jobert (eds.), Renewing Democratic Deliberation in Europe: The Challenge of Social and Civil Dialogue, Brussels, Peter Lang, 23-55
- Mosthaf, A. and T. Schank, C. Schnabel (2009), Low-Wage Employment Versus Unemployment: Which One Provides Better Prospects for Women? Bonn, IZA Discussion Paper No. 4611
- Schmid G. (2008), Full Employment in Europe – Managing Labour Market Transitions and Risks, Cheltenham, UK und Northampton, MA, USA, Edward Elgar
- Schmid , G. (2012), New Skills and Jobs in Europe. Pathways Towards Full Employment, Report for the European Commission (Directorate General for Research and Innovation),
http://ec.europa.eu/research/social-sciences/pdf/new-skills-and-jobs-in-europe_en.pdf