

Open Source: an environment for skills development and economic growth

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“Access [to ICTs] is not enough, it is the ability to create, to add value, that is important”

**Felipe Gonzalez
former Spanish Prime Minister
18/2/04**

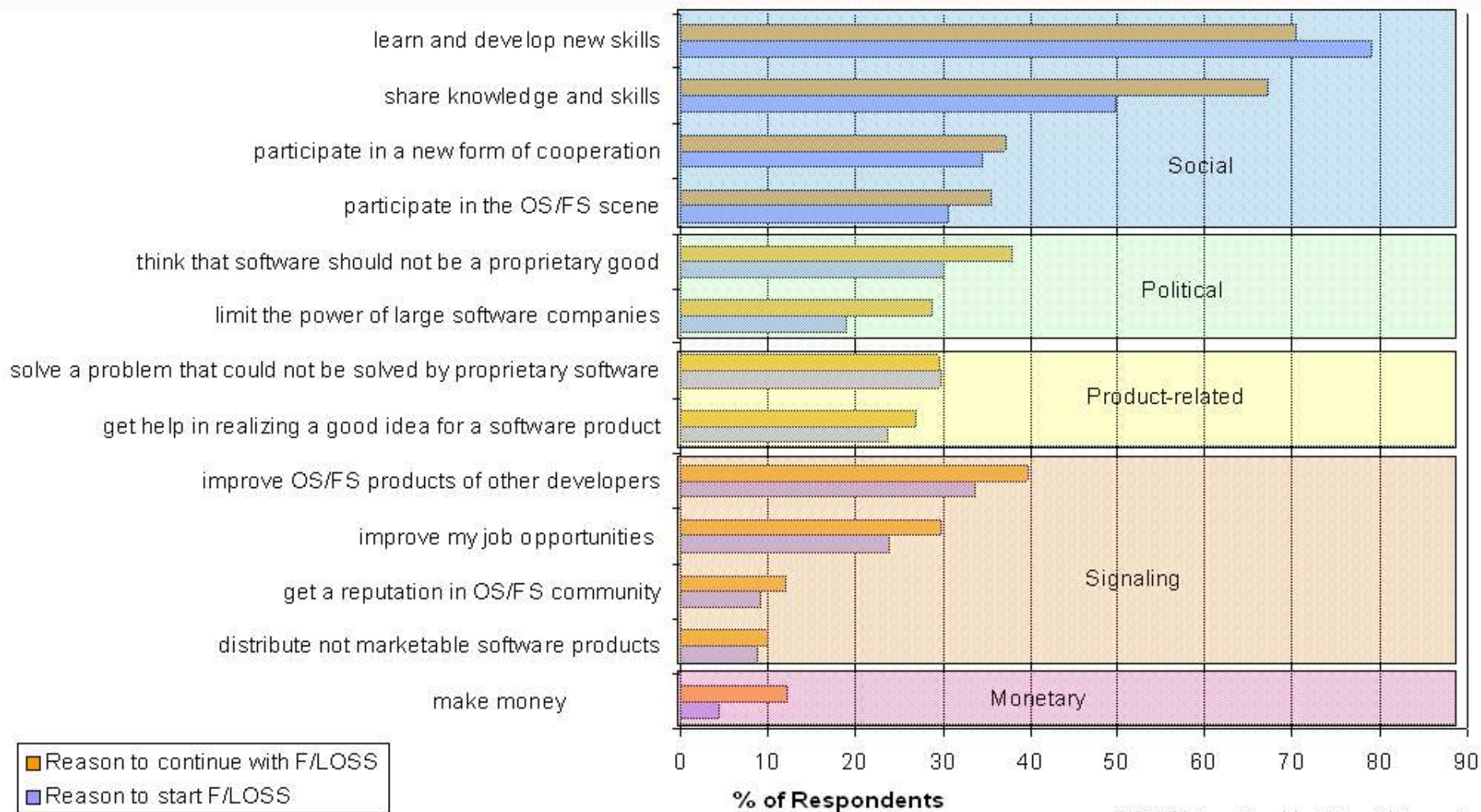
FLOSS is a training environment that enables this ability to create.

FLOSS increases the earning capacity of community participants without any explicit investment in training: a novel form of technology transfer.

FLOSS develops local skills

- Skills – programming, team management – are learnt through participating in the FLOSS community
- FLOSS encourages not only passive “use” but active participation in the creative process
- FLOSS provides a very low barrier to entry for creativity – you don’t *have* to be creative but if you want to, you easily *can*

What motivates FLOSS developers?



Learning skills – then sharing!

- **78%** of developers *join* the FLOSS community “**to learn and develop new skills**” (70% *continue* for this reason)
- **67%** of developers *continue* their participation in the FLOSS community “**to share ... knowledge and skills**”

Source: Free/Libre/Open Source Software (FLOSS) Study of Developers

These skills have economic value

- **30%** of developers participate in the FLOSS community “**to improve ... job opportunities**”
- **Over 30%** of developers **derive income directly** through their FLOSS work
- **A further 20%** **derive indirect income** as a result of their FLOSS work
- **18%** **got job because of FLOSS experience**

Source: Free/Libre/Open Source Software (FLOSS) Study of Developers

Employers appreciate this...

- **36%** of organisations “totally” or “somewhat” **agree that employees can work on FLOSS projects on employer time**
- These are not software companies! **16% of low IT-intensity companies** (retail, automobiles, tourism, construction) **“totally agree”** with this

Source: Free/Libre/Open Source Software (FLOSS) Study of Users

...but don't pay for it.

- **FLOSS communities are like informal apprenticeship**
- **Apprentice/students and master/teachers contribute their own time for free**
- **Nothing in life is free; a social cost borne voluntarily by the participants themselves**
- **Not paid for directly by those who benefit (employers, society at large)**

“To each according to need...”

- Everyone can benefit equally from this training, though not everyone invests equally in it
- Many “teachers” have been formally trained at university or at work (which is explicitly paid for)
- Formal training represents a subsidy – or technology transfer – from those who pay for formal training to those who don’t (or can’t)

“To each according to need...”

- **Within countries, this represents a technology transfer from big companies to SMEs, who can less afford formal training**
- **This is also a technology transfer to regions that can less afford formal training**
- **Globally, this represents a technology transfer from economies who can afford formal training, to those who cannot**

“To each according to need...”

- **Sectoral benefits: many countries may have formal computer training during computer science degree courses, but perhaps not in other subjects, e.g. biology**
- **FLOSS usage provides students of other subjects to *informally* learn computer skills, programming skills**
- **These computer skills build competences even in formal science training**

But do we all want to program?

- How will we know, unless we can try?
- HTML is a programming language – the web only took off because it was open, so people could learn to write their own sites just by copying and changing other sites
- “Programming” covers a very broad range of skills from HTML to C; FLOSS allows entry at any degree with little investment in time or effort

But do we all want to program?

- In a proprietary environment, you have to decide to be a programmer, then buy development software, then spend lots of time and effort – all of which is a risk and entry barrier
- With FLOSS, you can *tinker*. You don't need to buy tools. You can use them to the extent you choose.

But do we all want to program?

- Learning skills in FLOSS, you risk losing only your time and effort
- However, since the barrier to entry is low (HTML!) you can control the degree of your investment – paddle at the shallow end or dive in deeper.
- In proprietary environments, the dividing line between user and developer is much sharper – the pool has only a deep end, you have to dive in or stay out altogether.

Building ICT competencies

- Be passive users of “black-box” software or active participants in global ICT?
- Being active requires being able to create – and choose with the least barriers the level of creativity
- Developing regions need to avoid being locked out of skills and competencies
- Skills development requires access to the ability to create – you don’t have to be a programmer, but you *should* have the choice.

Conclusion...

“Access [to ICTs] is not enough, it is the ability to create, to add value, that is important”

Felipe Gonzalez, 18/2/04

...and FLOSS breaks the barrier between *using* and *creating* that is at the heart of the proprietary software model.

<http://flosspols.org>