

Business case:

E-invoicing across the Nordics

September 2019

Preface

«The use of e-invoicing may lead to fewer mistakes being made, increased efficiency, reduced paper consumption and more invoices paid on due date.»

Delightful, no? These are the words of Nikolai Astrup, Norwegian Minister of Digitalisation, in conjunction with new Norwegian regulations as of 2019. Several countries have already imposed mandatory e-invoicing in the public sector. Others appear to be following. The Ministry acknowledges that non-electronic invoicing is a time theft – recklessly stealing valuable time from the private sector, too. In addition to the benefits mentioned above, e-invoicing leads to better liquidity in the form of invoices being paid earlier, and reduced costs related to dunning and debt collection.

This report aims to shed light upon the scope and importance of e-invoicing. This is of significance for many small and medium sized businesses, where every single penny is noticeable on the bottom line. As an added bonus comes reduction of black economy – which should be of great interest for our respective public sector as well as the individual societies. For individuals, there are a number of benefits as well. In Norway, as many as 3.1 million people (out of 5.2 million citizens) have registered to receive all invoices electronically. Furthermore, a survey conducted by Visma show that as many as 74% prefer to receive their invoices electronically. Nevertheless, many continue to receive paper and email invoices against their wishes. This leads to an increase of unpaid invoices and unnecessary dunning fees.

E-invoicing serves a huge potential of socio-economic savings. Yet, Nordic authorities consider each individual company responsible for utilising these benefits, which is why e-invoicing is yet to be imposed.

Unfortunately, the digitalisation of Nordic businesses is progressing too slowly, and the proportion of e-invoices is continuously low. The incentives are present, however Nordic businesses are either not ambitious enough or they are unable to see the advantages. Why? The relationship between the issuer and the recipient of an e-invoice is asymmetrical. The recipient carries the cost of a traditional invoice and is the one taking benefits of converting to e-invoicing. The issuer absorbs little cost by issuing traditional invoices and has little to gain by making this change. Therefore, the issuer lacks incentives to take the leap.

In 2019, Visma estimates the potential savings to be € 19.2 billion annually. This number continues to increase.

Background

As an input to the Nordic Smart Government (NSG) roadmap process, Visma has promoted a proposal to facilitate mandatory e-invoicing across the Nordics. The proposal was substantiated by a business case about e-invoicing from Norway, presented to the NSG steering group on June 19th 2019. On this steering group meeting, NSG chairman suggested that Visma produces and presents a Nordic business case to NSG, as input for the NSG Roadmap process.

The business case in this report is socio-economic. It presents savings based on businesses' time and costs saved by converting invoices on paper and email to e-invoicing in businesses across the Nordics. The method is elaborated in the "Business Case" section. Visma does not conduct business in Iceland, thus our knowledge of this market is limited. Iceland is therefore excluded from the calculation. Regardless, the business case across the other Nordic markets, Denmark; Finland; Norway and Sweden, is quite substantial. We therefore assume that Iceland would add to the numbers.

Main findings and conclusion

- The business case states that the cross Nordic mandatory e-invoicing would represent annual savings of approximately € 19 billion across Norway, Sweden, Denmark and Finland.
- The largest business case is found in Sweden with annual savings calculated to approximately € 9,2 billion. Norway follows with € 4,2 billion, thereafter Denmark with € 3,9 billion and Finland with € 1,8 billion.

Business case

The business case argues that unnecessary time spent handling invoices can be converted to financial costs. The estimated savings are € 11,54 per incoming e-invoice for Norwegian businesses. At a community level, the business case assumes the time spent could either be saved – or more importantly, spent on productive sides of the businesses' operations.

From an international point of view, the Nordics represent high labour costs. Hence traditionally been good at substituting labour with automation, which has made us front-runners in multiple sectors. They were early adopters utilising ATMs, online banking and several other areas. It is necessary to maintain at a high level of efficiency in order to defend the high wage levels. This is positive for various reasons. High social stability, trustworthy markets and people, low levels of corruption and well-developed welfare states, avoiding social dropouts, are all pending a high efficiency economy.

Definitions and sources

Note that sources are referenced at the end of this report.

- **E-invoice (electronic invoice):** A structured document (XML or similar) which is generated electronically in the issuer's ERP system and transported automatically to the recipient, where it enters the recipient's ERP system.
- **Invoice on paper:** A traditional invoice on paper registered in the issuer's ERP system, printed, enveloped, marked with address, picked up by the postal service and sent via conventional transport to the receiver, where it is opened and the data punched and registered.
- **Invoice on Email:** A graphic representation of the invoice, usually PDF, that is sent to the receiver by email, where it is exported from a mailbox for either punching or OCR (PDF-converter).
- **Invoice scan:** An invoice on paper is scanned to create a picture representation of the invoice. For simplification we include OCR interpretation of both paper invoices and PDFs received. The average time for processing scanned invoices is faster than manual paper handling. The business case therefore uses an average between full manual paper invoice processing and scanning processing, which in practice means that we assume 50 % of all paper is scanned.
- **Average salary per year local currency:** This number states the average Full Time Equivalent (FTE) per country in local currency (*Ref.1).

- **Social/Fixed cost overhead:** This number is estimated and set at 50% of the labour cost. It represents the fact that most employees require an office space, some tools and recurring costs, like electricity etc.
- **Annual FTE cost local currency:** This is the average labour cost with the addition of the Social/Fixed cost overhead.
- **Annual FTE cost Euros:** These are the annual costs, converted to Euros, in order to get comparable figures between our countries. Currency rates will vary over time. The rates applied in the business case are:
 - EUR/NOK: 9,70
 - EUR/SEK: 10,64
 - EUR/DKK: 7,47
- **Annual FTE Hours:** These numbers state the number of hours in an average FTE per market. Our source is OECD (*Ref.2). They are used to calculate the cost-per-hour and per-minute per FTE.
- **Invoices total amount (sent):** There is no complete overview of total invoice numbers in the Nordic markets, which is why Visma now credit transfers per market, assuming that the majority of bank payments of this type are invoices. We know that some of these are salary payments and the like, and have therefore reduced the numbers-per-country scaling from 10% to 20% (*Ref.3).
- **B2B, B2G and B2C:** Abbreviations for business-to-business, business-to-government (including all public sector) and business-to-consumer invoicing.
- **Share B2B/B2G and B2C:** Visma assumes that the share between B2B/B2G and B2C is 40/60 (*Ref.4).
- **Electronic Invoices:** These numbers are based on several sources per market. There are no official statistics covering this, with the exception of Finland. The Finnish Central Bank has an overview of e-invoice sent by banks and operators. For other countries these numbers have been derived from various obtainable sources (*Ref. 5).
- **Savings for issuers:** This number is calculated by multiplying the number of non-electronic invoices, and multiply it with € 6, which is the assumed saving per electronic invoice issued by the businesses. Note that the gross number on saving, estimated in 2015, is € 6,90. We would believe the number has increased, but for calculation purposes we have used € 6, assuming that e-invoicing is not free – there are transaction cost attached. We have used € 0,90 for this purpose. Note that Visma's own customer charge for this is maximum € 0,30. The total savings are quite high on the issuing side because issuing is done to both B2B/B2G and B2C. Savings for receivers (see below) are only B2B (*Ref 4).
- **Savings for receivers:** These numbers are calculated by estimating the time it takes to receive a paper invoice and/or scanned/OCR'd invoice, and compare it to full manual handling for this process. Labour cost per market comes into play (*Ref.6).

Detailed business case per country

Base data	Norway	Sweden	Denmark	Finland
Avg. salary per year local currency	547320	415200	320040	27398
Social/fixed cost overhead	50%	50%	50%	50%
Annual FTE Cost (local currency)	820980	622800	480060	41097
Annual FTE Cost (Euros)	84637	58534	64265	41097
Annual FTE hours	1406	1447	1392	1555
Cost-per-hour (Euros)	60	40	46	26
Cost-per-minute (Euros)	1.00	0.67	0.77	0.44
Invoices total amount (sent)	612,600,000	1,400,000,000	630,000,000	831,818,500
Share B2B/B2G (40 %)	245,040,000	560,000,000	252,000,000	332,727,400
Share B2C (60 %)	367,560,000	840,000,000	378,000,000	499,091,100
Invoices electronic (Digital)				
B2B/B2G	95,565,600	196,000,000	100,800,000	243,900,000
B2C	99,600,000	147,800,000	100,000,000	365,850,000
Invoices non-electronic (Paper, email)				
B2B/B2G	149,474,400	364,000,000	151,200,000	88,827,400
B2C	267,960,000	692,200,000	278,000,000	133,241,100
Savings for issuers (€ 6/invoice) assuming converting all paper to digital invoices	2,504,606,400	6,337,200,000	2,575,200,000	1,332,411,000
Savings for receivers assuming converting all non-electronic to digital invoices (see calculation tab)	1,724,602,182	2,822,191,103	1,337,932,073	449,959,336
Annual potential saving (Euros)	4,229,208,582	9,159,391,103	3,913,132,073	1,782,370,336
Cross nordic business case annual savings – Nordic countries combined in Euros	19,084,102,094			

Calculation of savings for buyers (Incoming Invoices)

Norway		
Time/cost on processing	Time (Minutes)	Cost (Euros)
B2B buyer - receive paper invoice	25	25.08
B2B buyer - scan paper invoice	12	12.04
Buyer avg. time/cost paper invoice	18.5	18.56
B2B buyer – receive digital invoice	7	7.02
Savings per invoice		11.54
Incoming non-digital invoices		149,474,400
Annual savings in Euro/buyer		1,724,602,182

Sweden		
Time/cost on processing	Time (Minutes)	Cost (Euros)
B2B buyer - receive paper invoice	25	16.85
B2B buyer - scan paper invoice	12	8.09
Buyer avg. time/cost paper invoice	18.5	12.47
B2B buyer – receive digital invoice	7	4.72
Savings per invoice		7.75
Incoming non-digital invoices		364,000,000
Annual savings in Euro/buyer		2,822,191,103

Calculation of savings for buyers (Incoming Invoices)

Denmark		
Time/cost on processing	Time (Minutes)	Cost (Euros)
B2B buyer - receive paper invoice	25	19.24
B2B buyer - scan paper invoice	12	9.23
Buyer avg. time/cost paper invoice	18.5	14.23
B2B buyer – receive digital invoice	7	5.39
Savings per invoice		8.85
Incoming non-digital invoices		151,200,000
Annual savings in Euro/buyer		1,337,932,073

Finland		
Time/cost on processing	Time (Minutes)	Cost (Euros)
B2B buyer - receive paper invoice	25	11.01
B2B buyer - scan paper invoice	12	5.29
Buyer avg. time/cost paper invoice	18.5	8.15
B2B buyer – receive digital invoice	7	3.08
Savings per invoice		5.07
Incoming non-digital invoices		88,827,400
Annual savings in Euro/buyer		449,959,336

Reference list

Ref.1: Average salary per country:

Norway: <https://www.ssb.no/arbeid-og-lonn/statistikker/lonnansatt/aar>

Sweden: <https://www.scb.se/hitta-statistik/sverige-i-siffror/utbildning-jobb-och-pengar/medelloner-i-sverige/>

Denmark: <https://www.dst.dk/da/Statistik/Publikationer/gennemsnitsdanskere>

Finland: http://www.stat.fi/tup/suoluk/suoluk_tulot_en.html

Ref.2: Hours worked per FTE

All markets: <https://data.oecd.org/emp/hours-worked.htm>

Ref.3: Credit transfer volume in our markets

Norway: <https://www.norges-bank.no/aktuelt/nyheter-og-hendelser/Publikasjoner/Norges-Bank-Memo-/2019/norges-bank-memo-12019/>

Sweden: <https://www.riksbank.se/sv/statistik/betalningar-sedlar-och-mynt/betalningar/>
(Download XLS "betalningsinstrument")

Denmark: https://www.nationalbanken.dk/en/publications/Documents/2019/06/REPORT_Oversight%20of%20the%20financial%20infrastructure.pdf

Finland: <https://www.suomenpankki.fi/en/Statistics/payments-statistics/tables/>

Ref.4: Share B2B/B2G and B2C / Cost for issuing invoices paper vs digital

This report is not publicly available - please contact Visma/Ulf Bjornvold for a copy

Ref.5: Invoices electronic/digital

Norway: B2C numbers obtained from Nets: <https://www.nets.eu/no-nb/nyheter/Pages/Ett-knall%C3%A5r-for-eFaktura-med-100-millioner-transaksjoner.aspx>

Sweden: B2B – 75% of SMB are not sending digital invoices – number is reduced to 65% assuming large enterprises have a higher amount of digital invoices. This is an approximation assuming businesses can be transferred to no of trx given some corrections, hence 35 % are assumed to send digital invoices: <https://www.digg.se/nyheter--publikationer/nyheter/manga-smaforetagare-klarar-inte-nya-lagkraven-pa-e-faktura>

Sweden B2C: https://www.swedishbankers.se/media/4225/volymutveckling-e-faktura-internetbank_pm_2018.pdf

Denmark B2C: No direct source. We have contacted Nets on this issue. They state that to the extent B2C is the case in Denmark, it is via direct debit solutions, The invoice/payment infrastructure in Denmark differs from our other markets, as the claim (The "invoice") follows other paths than the payment. The numbers for Denmark, we think, are therefore at best, optimistic.

Finland B2B: <https://www.suomenpankki.fi/en/Statistics/payments-statistics/tables/>

Finland B2C: Calculated by assuming the 60/40 share on electronic invoices.

Ref. 6: Savings for receivers

We have several sources for this. We have mainly used own numbers – and cross checked them with various studies. These include the sc "Agfa"-report, estimates from SSØ (NO), Metier (NO) and FAD (NO). We expect the time consumption to be the same in other markets.

About Visma

Visma delivers software that simplifies and digitises core business processes in the private and public sector. With presence across the entire Nordic region along with Benelux, Central and Eastern Europe, we are one of Europe's leading software companies.

We believe in empowering people through technology. By helping close to one million customers run their business every day, we give companies a competitive edge and individuals time to focus on what they love.

Questions about the report?

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